
XVIII. *A Synopsis of the Testaceous Pneumonobranchous Mollusca of Great Britain.* By J. G. Jeffreys, Esq. In a Letter addressed to L. W. Dillwyn, Esq. F.R. and L.S.

Read November 18, and December 16, 1828.

DEAR SIR,

If you think that the following account of an interesting branch of our native Testacea, compiled from my own observations and a careful investigation of those authors who have written on the subject, will be found worthy the notice of the Linnean Society, I shall be glad to avail myself, with permission, of your medium in submitting it to that learned body. The few changes in system and nomenclature which I have ventured to propose are very partial, and I am sure that you will think with me that they are justifiable in an attempt to ascertain uncertain characters, or determine new ones. I do not lay much stress upon the distinctive marks furnished by the animals of this order specifically considered, though I am fully aware of their importance in forming the leading features of the higher divisions. The accompanying catalogue will I believe be found to comprise all the species hitherto known as British, with some not inconsiderable additions. They are, with a single exception, in my Cabinet.

I am, Dear Sir,

Yours truly,

J. G. JEFFREYS.

Swansea, September 1st, 1828.

Class. GASTEROPODA. Auct.

Ordo. PNEUMONOBANCHIA. PULMONES. Fér.

Stirps 1.—Animal; pallio interrupto; testâ plerumque spirali obtectum.

FAMILIARUM ET GENERUM SYNOPSIS.

Familia I. HELICIDÆ.—Tentaculis quatuor cylindricis, retractilibus; quorum superiora ad apicem oculigera.

II. CARYCHIADÆ.—Tentaculis duobus cylindricis, contractilibus, ad basin internam oculatis.

III. LIMNÆADÆ.—Tentaculis duobus compressis, contractilibus; quorum ad basin externam pedunculi oculigeri.

Familia I. HELICIDÆ. Leach.

Tentacula superiora longiora.

§ Testâ transverso-ovatâ, absque umbilico.

1. Succinea.

2. Vitrina.

§§ Testâ conoideâ seu depressâ, umbilico subcentrali.

3. Helix.

\$\$\$ Testâ turritâ, umbilico transverso, seu nullo.

4. Bulimus.

5. Cianella.

6. Clausilia.

7. Pupa.

Tentacula inferiora indistincta, seu nulla.

8. Alæa.

9. Vertigo.

Genus

Genus I. SUCCINEA. *Drap.*

Animal redundans, gelatinosum : *tentaculis* brevibus, inflatis :
sustentaculo crasso.

Testa ovato-conica : *spirâ exsertâ* ; *anfractu ultimo majore* :
aperturâ amplâ.

1. PUTRIS.

Animal griseo-maculatum. *Tentacula* concentricè rugosa.

Testa ampullacea, fragilis, nitida, glabra, subflava. *An-*
fractus 3. *Apertura* ovata, marginibus dispunctis.

Long. 0.6.—Diam. 0.35.

Succinea amphibia. *Drap. Hist. des Moll.* p. 58. t. 3.

f. 22. *Lam. Hist. des Anim. sans Vert.* 6. p. 135.

Helix putris. *Linn. Syst. Nat.* 1. p. 1249.

— succinea. *Müll. Verm.* 2. p. 97.

— limosa. *Dillw. Cat.* 2. p. 966.

α. Minor, oblonga ; apertura effusiore.

Common, in marshy places, on the water-flag ; but not,
as the name given to it by Draparnaud imports, amphi-
bious.

2. OBLONGA.

Animal nigro-griseum. *Tentacula* ferè conica.

Testa ovata, subventricosa, nitida, substriata, rufescenti-
cornea. *Anfractus* 3 vix 4, producti : *suturâ distinctâ.*
Apertura ovalis, peristomio subcontinuo.

Long 0.3.—Diam. 0.15.

Succinea oblonga. *Drap. Hist. des Moll.* p. 59. t. 3. f. 24.

In great abundance in a ditch at Britonferry near Swan-
sea.

Genus

Genus II. VITRINA. *Drap.*

Animal redundans : *pallii processu spiræ* partem obtegente.

Testa depresso-conica, fragilissima : *spirâ obliquâ* ; *anfractu ultimo* valdè maximo : *aperturâ obliquè lunatâ*, marginibus dispunctis.

1. MÜLLERI.

Animal albo-cinereum. *Sustentaculum* perangustum crassum. *Pallii processus* albus.

Testa orbiculata, utrinque convexa, hyalina, politissima, subvirescenti-alba. *Anfractus* 3. *Apertura* subrotundo-lunata.

Long. 0.125.—Diam. 0.175.

Helix pellucida. Müll. *Verm.* p. 16.

La Transparente. Geoff. p. 38. t. 2?

a. *Globosa* ; *spirâ prominulâ*.

In moist woods, in autumn, on the *Jungermannia platyphylla* (on which the animal feeds) ; and under decaying leaves. The shell differs from the following in the spire being more central and produced, and in the form of the aperture, which is slightly angular near the insertion of the columellar border. The size of the animal is also not so disproportionately large.

2. DRAPARNALDI.

Animal griseum, testam valdè superans. *Sustentaculum permagnum*.

Testa depressior, spirâ parùm exsertâ laterali, perlucida, subviridis. *Anfractus* 3. *Apertura ampla*, elliptico-lunata.

Long. 0.135.—Diam. 0.25.

Vitrina pellucida. Drap. *Hist. des Moll.* p. 119. t. 8.
f. 38.

Plentifully

Plentifully towards the end of autumn at the roots of the *Rosa spinosissima*, on the Swansea Burrows.

3. DEPRESSA.

Animal ——

Testa depressa, lentissimè et irregulariter rugosa, albida.

Anfractus 2, vix 3. *Apertura* lunata.

Long. 0.065.—Diam. 0.145.

As yet I have only found two dead specimens from Britonferry wood near Swansea. In its general contour this more nearly resembles the true *Helices* than any of the preceding ones. It is whitish, and has not much of the pellucidity and glossiness characteristic of its genus. The last volution is not so proportionally large and swollen, and the spire is in consequence more central.

4. ELONGATA.

Animal elongatum, peramplum. *Tentacula* brevia, ferè conica.

Testa globosa, spirâ prominulâ, alba. *Anfractus* vix 2.
Apertura ovato-lunata.

Long. 0.085.—Diam. 0.15.

Vitrina elongata. *Drap. Hist. des Moll.* p. 102. t. 8.
f. 40.

From Britonferry wood, near Swansea; very rare. Except in the fewer volutions and less orbicular form, (characters which do not alter with the growth of the shell,) I should have been inclined to consider this as the young of the *V. Müller*.

Draparnaud's representation of this shell is very incorrect, and by no means agrees with his description. Nor has he better succeeded in his figures of the *V. diaphana*,

judging from the appearance of French specimens of that shell in the cabinet of Mr. Dillwyn.

Genus III. HELIX. *Auct.*

Animal mediocre: sustentaculo lato, testam æquiparante vel parùm superante.

Testa conoidea seu depressa: umbilico subcentrali.

* *Subglobosæ, inæquilaterales; umbilico indistincto, in juno-
ribus perforato.*

1. ASPERSA.

Animal supernè verrucosum, luteo-griseum, fasciâ dorsali pallidiore.

Testa subrotundo-ovata, globosa, solidior, lutea, fasciis quatuor subrufis. Anfractus 4. Apertura subrotundo-lunata: peristomio albo, reflexo.

Long. 1.5.—Diam. 1.

Helix grisea. Linn. Syst. Nat. 1. p. 1247? Dillw.

Cat. 2. p. 943.

— aspersa. Miill. Verm. 2. p. 59.

— hortensis. Penn. Zool. 4. p. 136. t. 84. f. 129.

α. fasciis quinque fuscis angustis.

β. fasciâ unicâ alba, strigisque transversis.

γ. ventricosa, anfractibus ferè disjunctis.

Common in old walls, gardens, &c. The var. α is from the neighbourhood of Leith; and the last is found on the dry short grass which covers the limestone rocks at Oystermouth near Swansea.

Although this probably is the *Helix grisea* of Linnæus, from the great uncertainty which prevails in his descriptions of the banded species, I do not think that name ought to be retained to the exclusion of the more apt and now

now generally adopted one of *aspersa*, given to it by Müller.

2. POMATIA.

Animal supernè verrucosum, pallidè fuscum, subtùs griseum. *Tentacula* longiora.

Testa subrotundo-ovata, ventricosa, solidior, fasciis variis rufo-brunneis depicta. *Anfractus* 4—5. *Apertura* subrotundo-lunata : *peristomio* crasso, subreflexo.

Long. 2.—Diam. 1.5.

Helix pomatia. *Linn. Syst. Nat.* 1. p. 1244.

Not uncommon in woods of the midland and southern counties of England. Many distortions of the shell occur, but they may be all referred to the same principle, and cannot rank as varieties, which are chiefly influenced by food and situation.

3. ARBUSTORUM.

Animal verrucosum, nigro-viridescens. *Tentacula* per-brevia.

Testa globosa, solidior, fasciâ unicâ fuscâ maculisque flavis insignita. *Anfractus* 5. *Apertura* subrotundo-lunata : *peristomio* reflexo, in junioribus intùs submarginato.

Long. 0.75.—Diam. 0.65.

Helix arbustorum. *Linn. Syst. Nat.* 1. p. 1245.

α. efasciata, pellucida.

Not uncommon in moist woods.

4. NEMORALIS.

Animal colore varians, plerumque viridescenti-griseum.

Sustentaculum latum.

Testa rotundata, depressiuscula, solidior, nunc fasciis di-

versè picta interdùm unicolor. *Anfractus* 5—6. *Apertura* subrotundo-lunata, compressa. *Umbilicus* perangustus.

Long. 1.15.—Diam. 0.85.

Helix nemoralis. *Linn. Syst. Nat.* 1. p. 1247.

Common in hedges, woods, &c., particularly after showers of rain.

Among the numerous varieties of this species I cannot help remarking one, which in its markings and consistency seems closely allied to the *H. sylvatica* of Continental authors, and from which it only differs in being of a rather more globular form, and in having the umbilicus a little impressed.

5. HORTENSIS.

Animal colore varians, plerumque rubicundo-griseum. *Tentacula* grisea.

Testa rotundata, depressior, nunc variè fasciata, interdùm unicolor. *Anfractus* 5. *Apertura* subrotundo-lunata, costâ interiore albâ marginata: *peristomio* albo.

Long. 0.85.—Diam. 0.7.

Helix hortensis. *Müll. Verm.* 2. p. 52.

—nemoralis var. *Maton & Rackett in Linn. Trans.* 8. p. 206. *Dillw. Cat.* 2. p. 942.

Found with the last, though less commonly.

Linnaeus's variety of his *Helix nemoralis*, which has been referred by Müller and others to this shell, is probably the *H. vermiculata*, a Continental species.

** *Conoideæ, æquilaterales; umbilico angustato.*

6. FUSCA.

Animal —

Testa

Testa subglobosa, subdiaphana, fragilissima, luteo-fusca.

Anfractus vix 5. *Apertura* lunata : *peristomio* simplici.

Long. 0.225.—Diam. 0.3.

Helix fusca. *Mont. Test. Brit.* p. 424. t. 13. f. 1.

From woods in the neighbourhood of Swansea and Cardiff. Mr. J. S. Miller of Bristol, who has described this shell in the *Annals of Philosophy* as a new species (*H. subrufescens*), says he has not unfrequently found it in Somersetshire ; but it is at least a local species.

7. TROCHIFORMIS.

Animal fusco-griseum, nitidissimum. *Sustentaculum* perangustum tenue. *Tentacula* perlonga, valde flexilia.

Testa supernè conica, globosa ; subtùs planiuscula ; nitidissima, glabra, corneo-fulva. *Anfractus* 6. *Apertura* lunata, compressa.

Long. 0.1 ferè.—Diam. 0.1.

Helix trochiformis. *Mont. Test. Brit.* p. 427. t. 11. f. 9.

— fulva. *Drap. Hist. des Moll.* p. 81. t. 7. f. 12.

α. subfusca, diaphana.

Not uncommon under stones at the bank of an old canal on Crymlin Burrows ; and on the waterflag, and under decaying wood, in marshy ground, at Marino near Swansea. The var. α. is from Somersetshire.

To this species may perhaps be referred the *Trochus terrestris* of Pennant, said to have been found by Mr. Hudson on the mountains of Cumberland ; though the figure of that author (which hardly agrees with the description) represents quite a different shell. The *Helix fulva* of Müller is quite distinct, and is probably the *H. edentula* of Draparnaud.

8. MORTONI.

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Animal pallidum. Tentacula nigra, respectu corpusculi longa. (Müll.)

Testa suprà depressior, nitidissima, glabra ; subtùs planata, substriata ; lateribus utrinque acutis ; pallidè fulva. Anfractus 5. Apertura compressa, subrhomboidea.

Long. 0.085.—Diam. 0.11.

Helix Trochulus. Müll. Verm. 2. p. 79?

From the rejectamenta of the Avon river, near Bristol.

I have scarcely any doubt of this species being the *Trochus terrestris* β. of Da Costa, which is stated by that author to have been found by Mr. Morton in the clefts of a sallow near a pond in Thorpe Mandeville, Northamptonshire, and which, as well as the *Trochus terrestris* of Pennant, has been referred by Montagu and succeeding authors to the *Helix elegans*, a species inhabiting the plains of the South of France.

9. ACULEATA.

Animal grisescens, testâ erectâ incedit. Tentacula perlonga, cylindrica.

Testa globosa, lamellis mucronatis transversis aspera, fusca.

Anfractus vix 4. Apertura elliptico-rotundata.

Long. 0.085.—Diam. 0.1 ferè.

Helix aculeata. Müll. Verm. 2. p. 81.

— spinulosa. *Lightf. in Phil. Trans. 76. p. 166.*

Mont. Test. Brit. p. 429. t 11. f. 10. Maton & Rackett in Linn. Trans. 8. p. 201.

Not uncommon in a coppice at Newton near Swansea.
The animal feeds on the *Jungermannia platyphylla*.

10. LAMELLATA.

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Animal —

Testa pyramidalis, subglobosa, lamellis muticis numerosis, subfuscæ. Anfractus 6, parùm decrescentes, subturtitæ. Apertura lunata.

Long. 0.1.—Diam. 0.1.

From the neighbourhood of Scarborough, Yorkshire. Favoured me by Mr. J. S. Miller of Bristol (as well known for his elaborate work on the *Crinoidea* as for his successful attention to other intricate departments of natural history) under the specific name of *holosericea*; but Gmelin's and Ferussac's shell of that name is very different, being nearly allied to the *Helix obvoluta*, and is five times the size of this.

11. SERICEA.

Animal —

Testa subglobosa, nitidula, diaphana, setis obsita confertis, cereo-lutescens aut strigata. Anfractus 5—6. Aertura subrotundo-lunata, intùs subincrassata: peristomio posticè reflexo.

Long. 0.35.—Diam. 0.4.

Helix sericea. Müll. Verm. 2. p. 62. Drap. Hist. des Moll. p. 103. t. 7. f. 16, 17. Fér. Tabl. p. 44.

— hispida. *Mont. Test. Brit. p. 423. t. 23. f. 3. Maton & Rackett in Linn. Trans. 8. p. 198.*

— velutina. *Lam. Hist. des Anim. sans Vert. 6. p. 86?*

Not uncommon in hedge-banks and moist woods in Somersetshire.

*** *Depresso-conicæ; umbilico in aperto, spiram detegente.*

12. CINGENDA.

Animal albido-lutescens; collo purpurascente. Tentacula clavata, longiora.

Testa

Testa globosa, suprà depressior, glabra, zonis rufo-brunneis sæpè interruptis picta. *Anfractus* 5. *Apertura* subrotundo-lunata: *fauce* roseâ, internè marginatâ: *peristomio* posticè reflexo.

Long. 0.55.—Diam. 0.75.

Helix cingenda. *Mont. Test. Brit.* p. 418. t. 24. f. 4.

Maton & Rackett in Linn. Trans. 8. p. 195. t. 5. f. 6.

— rhodostoma. *Drap. Hist. des Moll.* p. 86. t. 5. f. 13, 15.

— strigata. *Dillw. Cat.* 2. p. 911.

— pisana. *Lam. Hist. des Anim. sans Vert.* 6. p. 82.

This species, which is rather local, covers the sandy plains near Tenby in vast profusion, probably affording nourishment to a great number of small birds of the Finch tribe, as I have frequently observed the dead shells collected in heaps, with the apex broken and the animal picked out. The beautiful pink gloss observable on the mouths of this and the following species, is entirely owing to the action of, and their exposure to, the sun. In the specimens found in more sheltered situations, the colours and markings are much fainter, and sometimes altogether wanting.

I suspect that Müller confounded this with the next, under the name of *Pisana*.

13. VIRGATA.

Animal purpurascente-cinereum. *Sustentaculum* crassum, subflavum.

Testa subconica, globosa, glabra, fasciâ mediâ rufescenti-brunneâ aliisque angustioribus sæpè confluentibus circumscripta. *Anfractus* 6. *Apertura* suborbiculata, internè marginata: *peristomio* subreflexo.

Long. 0.4.—Diam. 0.6.

Helix

Helix virgata. *Mont. Test. Brit.* 415. *t. 24. f. 1.* *Maton & Rackett in Linn. Trans.* 8. *p. 195.*

— variabilis. *Drap. Hist. des Moll.* p. 84. *t. 5. f. 11,*
12.

— pisana. *Dillw. Cat.* 2. *p. 911.*

a. minor, conica, obscurè rubra, fasciata, fauce purpurascenti.

Helix maritima. *Drap. Hist. des Moll.* p. 85. *t. 9, 10.*

Very plentiful on all sandy heaths. The variety is common on the sandy plains near Swansea.

14. CAPERATA.

Animal flavescenti-cinereum, supernè verrucosum. *Sustentaculum* crassiusculum.

Testa subdepressa, subcarinata, striis argutissimis exarata, fasciâ rufescenti-brunneâ spiram circumornante aliisque variis inferioribus. *Anfractus* vix 6. *Apertura* subrotundo-lunata, intùs marginata.

Long. 0.25.—Diam. 0.35.

Helix caperata. *Mont. Test. Brit.* p. 430. *t. 11. f. 11.*

Maton & Rackett in Linn. Trans. 8. *p. 196.*

— crenulata. *Müll. Verm.* 2. *p. 68?* *Dillw. Cat.* 2.
p. 895.

— striata. *Drap. Hist. des Moll.* p. 106. *t. 6. f. 18—21.*

Common in the same situations as the last.

15. PALLIDA.

Animal griseum; supernè fusco-verrucosum. *Sustentaculum* exile.

Testa subdepressa, globosa, fragilis, roseo-pallescens. *Anfractus* 6. *Apertura* subrotundo-lunata, intùs marginata.

Long. 0.5.—Diam. 0.7.

Helix pallida. *Don. British Shells*, t. 157. f. 2.

— *cantiana.* *Mont. Test. Brit.* p. 422. t. 23. f. 1.

Maton & Rackett in Linn. Trans. 8. p. 197.

α. *pauld minor, albida.*

Helix carthusiana. *Drap. Hist. des Moll.* p. 101. t. 7.
f. 3, 4.

Not uncommon in parts of Somersetshire and the neighbourhood of Swansea : to be seen in hedges after showers of rain. The variety, which exactly resembles some French specimens of Draparnaud's *carthusiana* in my possession, was presented to me by Mrs. Smith of Bristol, and was, I believe, found by that lady in Gloucestershire. The inhabitants of this and many of its congeners have a dorsal line or band, of a lighter colour than the rest of the body. It corresponds with the circular lines sometimes observable on the last volution of their shells.

Local names should at all times be avoided ; but where, as in the present instance, two such happen to be applied to the same species, there can be no doubt of the propriety of changing them.

16. CONCINNA.

Animal rufescens, politissimum. Tentacula longiora.

Testa subdepressa, subcarinata, nitidula, setis albidis valdè caducis sparsa, rufo-brunnea. Anfractus 5--6. Aertura subrotundo-lunata, intùs marginata. Umbilicus patulus.

Long. 0.2.—Diam. 0.3.

α. *minor, candidior ; aperturâ vix marginatâ.*

Helix polita. *Müll. Verm.* 2. p. 33?

— *hispida, γ.* *Drap. Hist. des Moll.* p. 104. t. 7.
f. 22?

Under

Under stones &c. in dry places in the neighbourhood of Swansea, mixed with the following; and very plentifully among the rejectamenta of the Avon river, near Bristol. The variety is of a smaller size, more pellucid, and of a paler colour, and was presented to me by Mr. Dillwyn as Irish. Müller's specimens (if this shell be the long-sought-for *H. polita* of that author) may have been bleached, and conveyed to the habitat mentioned by him (on the banks of torrents in Lombardy) by the waters of a flood.

17. RUFESCENS.

Animal nigro-griseum. Tentacula superiora crassiora, valde divergentia.

Testa depressior, glabra, striata, subcarinata, rufescenticornea. Anfractus 6. Apertura subrotundo-lunata, intus marginata: peristomio subreflexo. Umbilicus patulus.

Long. 0.25.—Diam. 0.5.

Helix rufescens. Penn. Brit. Zool. 4. p. 134. Mont.

Test. Brit. p. 420. t. 23. f. 2. Maton & Rackett in Linn. Trans. 8. p. 196. Dillw. Cat. 2. p. 895.

— *hispida, juniores, et var. helvetica. Müll. Verm. 2. p. 74.*

Common in hedges, gardens, &c. In every stage of growth, from half a line upwards, it is smooth, and not in the least hispid; and it is surprising that Montagu, who has been followed in this respect by succeeding British authors, should have confounded this with the following well-known Continental species.

It is either the *gabella* or *hispida*, var. β . of Draparnaud, but I am rather inclined to think the former.

18. HISPIDA.

Animal griseum. Sustentaculum album, crassum.

Testa subdepressa, globosa, substriata, setis obsita confertis.

Anfractus vix 5. Apertura subrotundo-lunata, plerumque emarginata. Umbilicus subangustatus, sinu profundo.

Long. 0.225.—Diam. 0.325.

Helix hispida. Linn. Syst. Nat. 1. p. 1244? Müll.

Verm. 2. p. 73.

—*rufescens, var. Mont. Test. Brit. p. 421.*

—*conspurcata. Drap. Hist. des Moll. p. 105. t. 7.*

f. 23—25.

$\alpha.$ minor, albida, striata, subcarinata.

$\beta.$ minor, tenuior; spirâ productiore.

$\gamma.$ paulò major, solidior; aperturâ intùs denticulato-marginatâ.

Common under stones &c. in shady places. The var. $\alpha.$ is found in moist willow grounds, and may be a distinct species. $\beta.$ is not uncommon on the Swansea Burrows, at the roots of the *Rosa spinosissima*.

I do not think that Draparnaud's *hispida* has ever been found in this country: ours, which is that of Müller, Da Costa, and Donovan, and probably also of Linnæus, is the *Helix conspurcata* of Continental writers, and constitutes a variety only remarkable for its more depressed form, and the dark irregular blotches or spots which are often observable on the surface. The spots are noticed by Müller, and originate in the mantle of the animal.

19. ERICETORUM.

Animal albido-griseum. Sustentaculum tenue, pellucidum.

Testa

Testa utrinque depresso, fragilis, albida, fasciâ superiore rufescenti-brunneâ aliisque sâpè divisis inferioribus. Anfractus 5—6. Apertura orbiculata, intùs marginata: peristomio subreflexo. Umbilicus valdè patens, sinu profundo.

Long. 0.35.—Diam. 0.65.

Helix ericetorum, β. Müll. Verm. 2. p. 34.

Common on heaths, sandy plains, &c. It does not exactly agree with any of the varieties of Draparnaud's *ericetorum* or *cespitosum*.

20. NITIDA.

Animal cærulescenti-nigrum, politissimum. Tentacula brevia, crassiuscula.

Testa subdepressa, nitidissima, substriata, fulvo-cornea.

Anfractus vix 5. Apertura suborbiculato-ovata: peristomio simplici. Umbilicus patulus, sinu profundo.

Long. 0.15.—Diam. 0.275.

Helix nitida. Müll. Verm. 2. p. 39. Lam. Hist. des Anim. sans Vert. 6. p. 91.

— nitens. *Gmel. Syst. Nat. 1. p. 3633.*

— lucida. *Drap. Hist. des Moll. p. 103. t. 8. f. 11, 12.*

(var.) *Mont. Test. Brit. p. 425?*

α. paulò minor, striata; anfractibus 6, sensim decrescentibus, convexis.

β. hyalina, albido-virescens.

Not uncommon under stones, at the roots of rushes &c., in marshy places near Swansea. Some specimens nearly equal the largest size noted by Müller, $3\frac{1}{3}$ lines of our measure. The var. β. I received from Mr. Dillwyn as Irish.

Gmelin, by changing the name given to this species by Müller, has created no little confusion.

21. NITIDULA.

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Animal griseo-maculatum, pellucidum. *Sustentaculum* albescens.

Testa depressior, nitida, glabra, cereo-lutescens, subtus albida. *Anfractus* vix 5, convexiusculi. *Apertura* magna, subovata : *peristomio* simplici. *Umbilicus* plusquam patens.

Long. 0.2.—Diam. 0.4.

Helix cellaria. *Müll. Verm.* 2. p. 28? *Gmel. Syst. Nat.* 1. p. 3634. *Dillw. Cat.* 2. p. 193.

— nitidula. *Drap. Hist. des Moll.* p. 117.

$\beta.$ minor, albida, diaphana, subcarinata ; anfractibus sensim decrescentibus.

Helix nitidula, $\beta.$ *Drap. Hist. des Moll.* p. 117. t. 8. f. 21, 22.

— nitidosa. *Fér. Tabl. des Anim. Moll.* p. 41.

Not uncommon under stones &c. in sheltered places. The variety is a very pretty shell, and approaches in form to the *Helix rufa* (*Helicophanta*, Féruccac) of Draparnaud.

22. LUCIDA.

Animal cærulescenti-griseum. *Sustentaculum* albidum, pellucidum, elongatum. *Tentacula* flexilia.

Testa deppressa, pellucida, nitidissima, testacei coloris ; subtus lactea. *Anfractus* 5—6, planiusculi. *Apertura* magna, obliquè lunata, emarginata. *Umbilicus* patulus, sinu profundo.

Long. 0.275.—Diam. 0.55.

Helix lucida. *Mont. Test. Brit.* p. 425. t. 23. f. 4.

Helix

Helix nitens. *Maton & Rackett in Linn. Trans.* 8. p. 198.

t. 5. f. 7.

— — — *cellaria.* *Lam. Hist. des Anim. sans Vert.* 6. p. 91.

Common ; found with the last.

23. ALLIACEA.

Animal nigrescens. *Tentacula brevia,* cylindrica.

Testa suprà plana, politissima, diaphana, rufesceni-cornea ; subtùs lactea. *Anfractus* 4—5, suturâ marginatâ. *Apertura obliqua,* subrotundo-lunata. *Umbilicus* subangustatus, sinu profundo.

Long. 0.1.—Diam. 0.225.

Helix alliaria. *Miller in Ann. of Philos.* 1822, p. 379.

Under stones &c. in moist situations ; often in company with the *H. nitida*, but by no means so common. The animal has a strong odour of garlic, which is very perceptible on its being plunged into boiling water. It is a very distinct species, and differs from the young of the last in the greater depression of its spire, and greater transparency and contraction of the umbilicus. First described by Mr. J. S. Miller in the *Annals of Philosophy* for 1822.

24. CRYSTALLINA.

Animal lacteum. *Tentacula superiora obtusè cylindrica.*

Testa suprà plana, vitrea, hyalina, politissima. *Anfractus* 5, parùm decrescentes, subtùs convexiusculi, suturâ submarginatâ. *Apertura lunata.* *Umbilicus angustatus,* foramine cylindrico.

Long. 0.075.—Diam. 0.125.

Helix crystallina. *Müll. Verm.* 2. p. 23. *Drap. Hist. des Moll.* p. 118. *t. 8. f. 13—17.* Non *Dillw. Cat.* 2. p. 909.

Under

Under stones in moist sheltered situations, but not very common. The shell varies much in size. Dead ones are of an opaque white colour.

First noticed as British by Mr. J. S. Miller in the *Annals of Philosophy* for 1822.

25. ROTUNDATA.

Animal pallidè griseum, supernè punctatum. Sustentaculum per breve, hyalinum.

Testa depressior, subcarinata, striis argutis divaricatis exarata, rufo-maculata. Anfractus 6—7. Apertura compressa, suborbiculata, emarginata. Umbilicus valdè patens, sinu profundo.

Long. 0.125.—Diam. 0.375.

Helix rotundata. Müll. Verm. 2. p. 29. Drap. Hist. des Moll. p. 114. t. 8. f. 4—7.

— radiata. *Da Costa Brit. Conch. p. 57. t. 4. f. 15, 16. Mont. Test. Brit. p. 432. t. 24. f. 3. Maton & Rackett in Linn. Trans. 8. p. 199.*

a. viridescenti-albida, immaculata.

Common in shady places, under decayed wood, &c. A single specimen of the variety has occurred to me from the neighbourhood of Swansea.

26. UMBILICATA.

Animal nigro-griseum, politum. Tentacula superiora cylindrica.

Testa subdepressa, subcarinata (præsertim juniores), divaricatè striata, brunnea. Anfractus vix 5, suturâ excavatâ. Apertura compressa, suborbiculata. Umbilicus valdè patens.

Long. 0.05.—Diam. 0.1.

Helix

Helix umbilicata. *Mont. Test. Brit.* p. 434. t. 13. f. 2.
Maton & Rackett in Linn. Trans. 8. p. 200. *Dillw.*
Cat. 2. p. 915.
—rupestris, β. *Drap. Hist. des Moll.* p. 82. t. 7.
f. 7—9.

Very plentiful in the crevices of limestone-rocks near Swansea, Tenby, and other parts of South Wales; and in the rocks near Bristol. The animal walks with its shell erect, owing to the shortness of its foot.

27. PYGMÆA.

Animal nigro-griseum, politum. Tentacula superiora filiformia, approximata. Sustentaculum longius.

Testa subdepressa, pellucida, subtiliter striata, pallidè brunnea. Anfractus 3—4, globosi. Apertura compressa, suborbiculata: peristomio simplici, marginibus disjunctis. Umbilicus patulus, sinu profundo.

Long. 0.025.—Diam. 0.06.

Helix pygmæa. *Drap. Hist. des Moll.* p. 114. t. 8.
f. 8—10.

—Kirbii. *Shepp. in Linn. Trans.* 14. p. 162.

At the roots of rushes in a marshy piece of ground at Marino near Swansea.

**** *Depressæ; peristomio incrassato, reflexo.*

28. PULCHELLA.

Animal croceo-lactescens, pellucidum. Tentacula perbrevia; superiora cylindrica.

Testa pellucida, nitida, subtiliter striata, albida. Anfractus 3—4, subglobosi. Umbilicus patens, sinu profundo. Apertura suborbicularis: peristomio subcontinuo.

Long. 0.04.—Diam. 0.1.

Helix pulchella. Müll. *Verm.* 2. p. 30. *Drap. Hist. des Moll.* p. 112. t. 7. f. 30—32.

— paludosa. *Da Costa Brit. Conch.* p. 59. *Mont. Test. Brit.* p. 440. *Maton & Rackett in Linn. Trans.* 8. p. 193. t. 5. f. 5.

α. epidermide laminosâ induta.

Helix costata. Müll. *Verm.* 2. p. 31.

— crenella. *Mont. Test. Brit.* p. 441. t. 13. f. 3.

Turbo helicinus. *Lightf. in Phil. Trans.* 76. t. 3. f. 1—4.

Common in moist places under stones, in moss, and at the roots of grass.

29. ACUTA.

Animal suprà nigrescenti-rufum, granulatumque; subtùs pallidius. *Tentacula superiora* longiora.

Testa solidior, granulato-scabra, carinata, rufo-maculata. *Anfractus* 5, subtùs convexiusculi. *Apertura* transverso-ovata: *peristomio* continuo. *Umbilicus* patulus.

Long. 0.3.—Diam. 0.65.

Helix lapicida. *Linn. Syst. Nat.* 1. p. 1241.

— acuta. *Da Costa Brit. Conch.* p. 55. t. 4. f. 9.

Not uncommon in the clefts of rocks, under stones, &c. Somersetshire.

I cannot account for the vulgar error which dictated to Linnaeus the name of *lapicida*, or Stone-eroder, for this shell.

Genus IV. BULIMUS. Bruguière.

Animal elongatum. *Sustentaculum* angustum, testam non æquiparans.

Testa oblonga, anfractu ultimo majore. *Apertura* inæqualis, ad basin integra. *Umbilicus* semiclausus, perforatus.

* *Ovato-*

* *Ovato-oblongæ; apice obtuso: peristomio extùs reflexo.*

1. OBSCURUS.

Animal rosaceo-griseum. Sustentaculum crassum. Tentacula superiora subulata, tenuiter arcuata.

Testa oblongiuscula, ventricosa, tenuis, epidermide luteo-fusco (præsertim in junioribus) induta. Anfractus 6—7. Apertura subovata, marginibus subinæqualibus: peristomio albo, incrassato. Umbilicus angustatus.

Long. 0.35.—Diam. 0.125.

Bulimus obscurus. Drap. Hist. des Moll. p. 74. t. 4. f. 23.

— *hordeaceus. Brug. Encycl. Meth. n. 62. Lam. Hist. des Anim. sans Vert. 6. p. 125.*

Helix obscura. Müll. Verm. 2. p. 103.

In woods, hedge-banks, under stones, &c.; but not very common.

2. MONTACUTI.

Animal pallidum. Tentacula clavata. (Mont.)

Testa oblonga, ventricosior, ferrugineo-fusca. Anfractus 6—7, reticulato-striati. Apertura subovata, marginibus inæqualibus: peristomio rosaceo-albo, in columellam parùm reflexo. Umbilicus subangustatus.

Long 0.6.—Diam. 0.275.

Bulimus montanus. Drap. Hist. des Moll. p. 74. t. 4. f. 22.

Helix Lackhamensis. Mont. Test. Brit. p. 394. t. 11. f. 3. Maton & Rackett in Linn. Trans. 8. p. 212. Dillw. Cat. 2. p. 953.

In moist woods of the midland and southern counties of
England,

England, though by no means common. For specimens I am indebted to my friend Mrs. Smith, who found them in Shortwood, Gloucestershire. Mr. Miller also tells me that he has collected several alive from the bark of *Viburnum Lantana* in woods near Bristol.

** *Elongato-oblongæ*; *apice acuto*: *peristomio simplici*.

3. ACUTUS.

Animal pallidè flavescens. Tentacula superiora longa, subulata; inferiora brevissima.

Testa clavata, ventricosa, striata, albida, fasciis fulvis stri-gatis aut oblitteratis. Anfractus 8—9. Apertura sub-ovata, marginibus subinæqualibus. Peristomium pos-ticè reflexiusculum.

Long. 0.6.—Diam. 0.2 ferè.

Bulimus acutus. Brug. Encycl. Meth. n. 42. Drap. Hist. des Moll. p. 77. t. 4. f. 29.

Helix acuta (var.). Müll. Verm. 2. p. 100.

— *bifasciata. Pult. Dorset. p. 49; ed. 2. p. 55. t. 18. f. 8—10. Maton & Rackett in Linn. Trans. 8. p. 210.*

Turbo fasciatus. Penn. Brit. Zool. 4. p. 131. t. 82. f. 119.

α. testa ventricosior, fasciis 2 nigro-fuscis pulchrè ornata.

Abundantly on sandy banks and high plains on many of the western coasts. The *Bulimus ventricosus* of Draparnaud, which that author refers to the *B. acntus* of Müller, is nothing more than a variety of this species.

The *Helix (Cochlicella) Clavulus* of Féruccac (described by Mr. J. S. Miller in the *Annals of Philosophy* under the name of *Helix Goodallii*), which is found so abundantly in the Pine-

Pine-pits at Miller's nursery near Bristol, can hardly be said to be thoroughly naturalized.

Genus V. CIONELLA.

Animal glutinosum. Tentacula inferiora brevissima.

Testa oblonga seu elongata; anfractu ultimo majore. Apex acutiusculus. Columella subinterrupta. Apertura canaliculata, ad basin subeffusa, marginibus inaequalisimis. Umbilicus nullus.

Baron Féruccac remarks, that the animals of his *Styloides*, a group of his subgenus *Cochlicopa*, and which answers to this division, do not agree in their conformation with those of the true *Polyphemi* of Montfort. This remark will, I believe, be found to apply equally well to the genus *Achatina* as established by Lamarck, besides the character which seems essential to that genus, of the truncature of the columella being parallel, or nearly so, with the base of the shell. In the genus I have proposed, the columella is slightly interrupted, and forms a channel or sinus in the aperture; though I have not observed that it is attended on the part of the animal by any corresponding peculiarity.

1. LUBRICA.

Animal nitidum, fuscescenti-nigrum; subtùs pallidius. Tentacula inferiora vix percipienda.

Testa oblonga, subcylindrica, diaphana, polita, nitidissima, fulvo-flavescens. Anfractus 4—6, rotundati. Apertura ovato-oblonga, in junioribus ad basin arcuata: peristomio sàepè incrassato, luteo, in columellam reflexiusculo.

Long. 0.25.—Diam. 0.085.

Helix

Helix subcylindrica. *Linn. Syst. Nat.* 1. p. 1248? *Dillw.*

Cat. 2. p. 952.

— *lubrica.* *Müll. Verm.* 2. p. 104.

Bulimus lubricus. *Brug. Encycl. Meth.* n. 23. *Lam.*
Hist. des Anim. sans Vert. 6. p. 126.

Buccinum obtusulum. *Adams's Microsc. Essays,* t. 25.
f. 25.

Common in moist places, at the roots of grass, under stones, decaying wood, &c.

2. ACICULA.

Animal albidum, pellucidum. *Tentacula superiora subulata.*

Testa elongato-oblonga, diaphana, nitidissima, albida. *Anfractus* 6, *turriti.* *Apertura elliptica, convoluta, raro intus submarginata: peristomio simplici.*

Long. 0.2.—Diam. 0.05.

Buccinum Acicula. *Müll. Verm.* 2. p. 150.

Bulimus Acicula. *Brug. Encycl. Meth.* n. 22. *Drap.*
Hist. des Moll. p. 75. t. 4. f. 25, 26.

Helix octona. *Gmel. Syst. Nat.* 1. p. 3653.

Buccinum terrestre. *Mont. Test. Brit.* p. 248. t. 8. f. 3.

In moss at the roots of grass, &c. in sheltered situations; very plentifully among the rejectamenta of streams. I once found it alive in a coppice at Newton near Swansea.

3. ELONGATA.

Animal —

Testa elongato-oblonga, subturrita, striata, nitida, pellucida, lutescenti-alba. *Anfractus* 8—9, *teretes, acuminati, surâ profundâ.* *Apertura ovata: peristomio simplici.*

Long. 0.6.—Diam. 0.125.

Bulimus

Bulimus octonus. *Brug. Encycl. Meth. n. 47.* *Lam.*

Hist. des Anim. sans Vert. 6. p. 124.

Helix octona, β. *Gmel. Syst. Nat. 1.* p. 3653.

I am happy in being enabled to add the following very respectable authorities for considering this shell as British. I was lately presented with a specimen which I observed in the cabinet of Mr. Henry Collins of Swansea, who assured me that he had found it a few years ago, in company with the *Clausilia nigricans* and *Pupa umbilicata*, in the walls of the old castle at Oystermouth near Swansea. It is a young shell, and has the remains of the animal in it. Mr. Dillwyn also favoured me with a full-grown specimen, which he believes was given him by Miss Hutchins, as collected by that lady in the neighbourhood of Bantry, Ireland. This latter specimen was sent upon the above authority by Mr. Dillwyn to the late Colonel Montagu to be named, who returned it for further information.

The *Helix octona* of Linnæus, and probably also of Dr. Pulteney, is the *Helix octanfracta* of Montagu and other British authors.

Genus VI. CLAUSILIA. *Drap.*

Animal; corpore angusto, attenuato: tentaculis inferioribus brevissimis.

Testa fusiformis, elongata, acuminata: spirâ sinistrorsâ, intùs juxta aperturam ossiculo testaceo resiliente seu clauso plerumque instructâ. Apertura laminis coarctata, extùs compressa: peristomio continuo, undique libero, reflexo. Umbilicus perangustus.

This and part of the genus *Cyclostoma* of Lamarck (the shells of which latter are uniformly dextral) have been, with

with many others of the land *Turbines* of Linnæus, reunited by Féruccac under his subgenus *Cochlodina*; but, as I am inclined to think, without sufficient reason. The validity of a theory first proposed by our older physiological writers, that a peculiarity in the form of the shell, attended by a corresponding formation in its animal inhabitant, is of itself sufficient ground for systematical distinction, has been often questioned, but is I believe at present, with some partial exceptions, pretty well established. But it is most curious that facts, in themselves indicating the closest relation between the animal and its external covering, and which at first seem totally opposed to all the known rules of organization, have at the same time been either disregarded as mere *lusus naturæ*, and therefore unworthy of the attention of the naturalist, or, in the prevailing rage for classification, adopted as generic characters in the fullest and sometimes most absurd extent. The reversed direction of the spire of the shell in the restricted order *Mollusca* is, it is well known, influenced by the position of the circulating and respiratory organs of the animal; and, according to the frequency of its occurrence, and its presumed perpetuation in individuals, furnishes more or less invariable characters in the distribution of that intricate tribe. But I am convinced that the distinction ends here, and that it ought not to be extended to those tribes in which, from the more imperfect organization of the animals, there is not the same connexion between their external and internal structure. Such is the case with the *Nautilidæ* and others of the testaceous *Annelides*, many of the individuals of which have been generically separated upon no other ground than a variation in the form of their shells, without any regard to the characters afforded by the inhabitant. As we descend in the scale of animated nature,

instances

instances of this seeming disorganization are still more numerous, while our researches become necessarily more confined; and we are at last forced to confess how very imperfect our greatest diligence has been, and what a large extent of ground yet remains untrodden in the fields of natural history.

* *Incompletæ; umbilico perforato.*

1. **F R A G I L I S.**

Animal flavo-fuscescens. *Tentacula superiora* breviora, clavata.

Testa clavata, subventricosa, striata, pellucida, nitida, fulva.

Anfractus 6—7. *Apertura* compressa, subquadrata, interdùm uniplicata: *peristomio* simplici, posticè subreflexo.

Long. 0.25.—Diam. 0.085.

Turbo perversus. *Linn. Syst. Nat.* 1. p. 1240.

Pupa fragilis. *Drap. Hist. des Moll.* p. 68. t. 4. f. 4.

Balea fragilis. *Leach MSS.*

Among moss, under the bark of trees, &c., but not very common. The females have their shells much more ventricose and with fewer volutions.

** *Completae; umbilico imperforato.*

2. **N I G R I C A N S.**

Animal nitidum, fuscum, supernè corrugatum. *Sustentaculum* tenuius, angustum.

Testa subventricosa, subopaca, subcrenato-striata, nigrescenti-fusca. *Anfractus* 10—12. *Apertura* subtriangularis plicis 2 columellaribus distantibus instructa: *peristomio* producto, albido, incrassato.

Long. 0.5.—Diam. 0.085.

Clausilia rugosa. *Drap. Hist. des Moll.* p. 73. t. 4.
f. 19, 20. *Lam. Hist. des Anim. sans Vert.* 6.
p. 115.

Helix perversa. Müll. *Verm.* 2. p. 118.

Turbo perversus. Penn. Brit. Zool. 4. p. 130. t. 82.
f. 116. Don. Brit. Shells, 2. t. 72.

— bidens. *Mont. Test. Brit.* p. 357. t. 11. f. 7.

— nigricans. *Pult. Dorset.* p. 46. ed. 2. p. 51. t. 19.
f. 19. *Merton & Backett in Liver Trans.* 2. p. 120.

J. R. Maitland & Rackett in Linn. Trans. 8. p. 180.
α. ventricosior; apertura plicis 2 vix 3 mediis columella-
ribus.

β. minor; anfractibus paucioribus.

Turbo Everetti: *Miller in Ann. of Philos.* 1822. p. 377.

Common in the clefts of old walls, under stones, &c. Many curious distortions occur of the shell. In one a prominent medial ridge accompanies the order of the volutions.

3. PARVULA.

Animal —

*Testa gracilis, pellucida, glabriuscula, fulva. Anfractus 9,
sutura indistincta. Apertura uti in precedente 2-pli-
cata.*

Long. 0.425.—Diam. 0.07.

Helix (Cochlodina) parvula. Fér. Tab. des Moll. p. 63.

Of this rare and elegant shell I found one specimen which had the remains of the animal in it, among the rejectamenta of the Avon river near Bristol. Féruccac restricts the locality of the species to France and Switzerland. It is of a much more slender and tapering form than the last, with the suture less distinct, and is nearly smooth and exceedingly transparent.

4. PLICATULA.

4. PLICATULA.

Animal ——

Testa ventricosa, tenuis, pellucida, fuscescens, striis 40—50 ad aperturam confertioribus exarata. Apertura dilatata, subquadrata, plicis 2 columellaribus distantibus, mediisque 2 vix 3 minoribus instructa : peristomio albo, tenuiore.

Long. 0.4.—Diam. 0.1 ferè.

Clausilia plicatula. Drap. Hist. des Moll. p. 72. t. 4. f. 17, 18.

— Rolphii. *Leach MSS.*

For this shell I am obliged to Mr. Dillwyn, to whom it had been sent by Dr. Leach. Charlton wood, Kent, is mentioned by him as its locality.

5. LABIATA.

Animal ——

Testa subventricosa, subopaca, fuscescenti-cornea, clathratim striata. Anfractus 10, suturâ indistinctâ. Apertura suborbiculata, dilatata, plicis 2 columellaribus instructa : peristomio albo, incrassato.

Long. 0.65.—Diam. 0.125.

Clausilia solida. Drap. Hist. des Moll. p. 69. t. 4. f. 8, 9.

Turbo labiatus. Mont. Test. Brit. p. 362. t. 11. f. 6.

Maton & Rackett in Linn. Trans. 8. p. 180. Dillw. Cat. 2. p. 875.

I observed a specimen of this shell in the extensive collection of Mr. Lyons of Tenby, who said it came from Hyde Park, near the Serpentine river.

6. VENTRICOSA.

Animal —

Testa ventricosior, tenuis, subpellucida, nigro-fuscescens, striis argutis numerosis exarata. *Anfractus* 12, suturâ obliquiore. *Apertura* subquadrata, dilatata, plicis 2 columellaribus approximatis, mediisque 2 vix 3 minoribus instructa : *peristomio* tenui, ferè disjuncto.

Long. 0.65.—Diam. 0.125.

Clausilia ventricosa. *Drap. Hist. des Moll.* p. 7. t. 4. f. 14.

Helix perversa (adulta). *Müll. Verm.* 2. p. 118.

Turbo biplicatus. *Mont. Test. Brit.* p. 361. t. 11. f. 5.
Maton & Rackett in Linn. Trans. 8. p. 179. *Dillw. Cat.* 2. p. 874.

Helix (Cochlodina) ventriculosa. *Fér. Tab. des Moll.* p. 63.

For this also I am indebted to Mr. Dillwyn, who received it from Colonel Montagu as British. It bears some resemblance to the *C. plicatula*, but is larger, of a thinner texture, and has the striæ much finer and more numerous. The teeth are also differently disposed.

The *C. ventricosa* of Draparnaud constitutes a variety of this species, distinguished by the more oval form of the aperture and more tumid volutions.

7. DERUGATA.

Animal pallidè fulvum. *Tentacula superiora* clavata, longiora. *Testa* subarcuata, ventricosior, glabriuscula, nitida, pellucida, fulva. *Anfractus* 10—12. *Apertura* subrhomboidea, biplicata : *peristomio* albo, subincrassato, columellæ insidenti : *clausio* emarginato.

Long. 0.65.—Diam. 0.135.

Clausilia

Clausilia bidens. *Drap. Hist. des Moll.* p. 68. t. 4.
f. 5—7.

Helix bidens. *Müll. Verm.* 2. p. 116.

Turbo laminatus. *Pult. Dorset.* p. 46. ed. 2. p. 51. t. 19.
f. 9. *Mont. Test. Brit.* p. 359. t. 11. f. 4.

Helix (Cochlodina) derugata. *Fér. Tab. des Moll.* p. 63.

Not uncommon on the bark of trees in many of the mid-land and southern counties of England.

Genus VII. PUPA. *Drap.*

Animal corpore attenuato; anteriore parte capitinis proboscidali.
Testa pyramidali-cylindracea; anfractu ultimo ferè majore:
apertura dilatata, marginibus disjunctis, intùs lamellis continuis coarctata: peristomio extùs reflexo.
Umbilicus subperforatus.

1. SECALE.

Animal nigrescenti-fuscum, nitidum, supernè verrucosum.
Sustentaculum angustum, crassum.

Testa cylindracea, in apicem attenuata, obliquè striata,
pallidè fusca. Anfractus 8. Apertura subrhomboidea,
plicis 7—8 albis, nempè 4 columellaribus et 3—4 labralibus instructa: peristomio albo.

Long. 0.3.—Diam. 0.115.

Pupa secale. *Drap. Hist. des Moll.* p. 64. t. 3. f. 49, 50.
Lam. Hist. des Anim. sans Vert. 6. p. 110.
Turbo Juniperi. *Mont. Test. Brit.* p. 340. t. 12. f. 12.
Maton & Rackett in Linn. Trans. 8. p. 182. *Dillw.*
Cat. 2. p. 877.

Plentifully in the crevices of limestone-rocks in some parts of Somersetshire and Gloucestershire. When young the

the shell is clothed with an earthy covering like that of the *Bulimus obscurus*. This seems a provisional defence to the animal until the teeth of the aperture are completely formed, when it divests itself of its coat by rubbing the shell against extraneous substances; and it is one of the many and various contrivances of nature which we cannot sufficiently admire.

This is not the *Grain d'avoine* of Geoffroy, to which as well as the *Pupa avena* of Draparnaud, Féruccac has referred it. The *Helix ventricosa* of Müller is without doubt this species in its young state.

2. RINGENS.

Animal —

Testa ventricosa, nitida, glabra, fulva. Anfractus 5, suturâ linearî. Apertura elongato-lunata, plicis 5, inæqualibus, nempè 3 columellaribus et 2 labralibus instructa : peristomio fulvo, subincrastato. Umbilicus foramine cylindrico.

Long. 0.115.—Diam. 0.065.

Vertigo anglica. Fér. Tab. des Moll. p. 64.

From the neighbourhood of Scarborough by Mr. J. S. Miller.

3. UMBILICATA.

Animal nigro-griseum, politum. Tentacula superiora arcuata.

Testa cylindracea, glabra, nitida, fulvescenti-cornea. Anfractus 5—7. Apertura elongato-lunata, plicâ unicâ columellari et aliâ interdùm tenuiori in ipso columellæ labio instructa : peristomio subincrastato. Umbilicus angustatus, foramine cylindrico.

Long.

Long. 0.14.—Diam. 0.075.

Pupa umbilicata. *Drap. Hist. des Moll.* p. 62. t. 3. f. 39,
40. *Lam. Hist. des Anim. sans Vert.* 6. p. 111.

Turbo mūscorum. *Mont. Test. Brit.* p. 335. t. 22. f. 3.
Maton & Rackett in Linn. Trans. 8. p. 182.

α. major, fulva, ferè edentula.

Common everywhere among moss, in the clefts of old walls, &c.

The character of “apertura edentula” given by Linnæus to his *Turbo muscorum* will hardly suit this species. I rather think that celebrated naturalist has, with Geoffroy, Müller, and others, confounded it with the following, to which, indeed, at first sight it bears no slight resemblance.

Genus VIII. ALÆA.

Animal ; tentaculis inferioribus punctiformibus.

Testa verè cylindrica. Apertura extùs plerumque marginata, et intùs denticulis sive lamellis incontinuis munita, marginibus subæqualibus : peristomio simplici.

I have separated this from the genus *Vertigo* as established by Féruccac, for the reasons stated in my remarks on *Clausilia*. From *Pupa* it differs in the shell being always of a more cylindrical form, and in having the aperture generally thickened by an exterior rib, and never reflexed. The teeth too, when present, are never laminar or continued on the penultimate whorl. The animal agrees in most respects with that of *Vertigo*.

1. MARGINATA.

Animal nigro-griseum, nitidum. Sustentaculum crassulum.
Testa subventricosa, nitida, glabriuscula, corneo-fuscescens.

Anfractus

Anfractus 5—7, suturâ profundâ. *Apertura* subrotundo-lunata, extûs costâ fulvâ, intûs denticulo unico in mediâ columellâ instructa. *Umbilicus* subapertus.

Long. 0.15.—Diam. 0.065.

Turbo muscorum. *Linn. Syst. Nat.* 1. p. 1240?

Helix muscorum. *Müll. Verm.* 2. p. 105?

Pupa marginata. *Drap. Hist. des Moll.* p. 61. t. 3.
f. 36—38.

— *muscorum*. *Lam. Hist. des Anim. sans Vert.* 6. p. 111.

Turbo chrysalis. *Turton's Conch. Dict.*

Not uncommon in marshy ground, under stones, at the roots of grass, &c. It varies exceedingly in size and the compactness of its spire.

2. NITIDA.

Animal —

Testa dolioliformis, ventricosa, substriata, corneo-fuscescens. *Anfractus* 4—5. *Apertura* subrotundo-lunata, edentula, extûs emarginata: *peristomio* posticè parùm reflexo. *Umbilicus* subapertus.

Long. 0.1 ferè—Diam. 0.05.

Pupa edentula. *Drap. Hist. des Moll.* p. 59. t. 3. f. 28,
29.

Vertigo nitida. *Fér. Tab. des Moll.* p. 64.

Turbo offtonensis. *Shepp. in Linn. Trans.* 14. p. 155?

At the roots of grass in a rather marshy piece of ground near Swansea, but rare. Mr. J. S. Miller tells me it is found plentifully around Bristol.

I am inclined to think this is the variety of the *Pupa umbilicata* noticed by Montagu, who says (with reference to that shell) that it is only half the size, and wants the tooth and marginated aperture.

3. REVOLUTA.

3. REVOLUTA.

Animal —

Testa subventricosa, subattenuata, albida, glabra. *Anfractus* 5, sensim minores, suturâ levi. *Apertura* suborbicularis, extrinsecalis, edentula, nec marginata: *peristomio* posticè subreflexo. *Umbilicus* dilatatus, compressus, foramine cylindrico.

Long. 0.1.—Diam. 0.05.

Among the rejectamenta of a small stream at Marino near Swansea, where only one specimen has as yet occurred to me. The umbilicus is much more flattened and open than in the rest of the genus.

4. CYLINDRICA.

Animal —

Testa attenuata, pellucida, striis argutis obliquis, pallidè fusca. *Anfractus* 5, suturâ profundâ. *Apertura* ovata, extùs parùm marginata, edentula. *Umbilicus* angustatus.

Long. 0.075.—Diam. 0.03.

Pupa muscorum (α). *Drap. Hist. des Moll.* p. 59.

Vertigo cylindrica. *Fér. Tab. des Moll.* p. 64.

Of this very beautiful little shell I found a single live specimen on the under side of a loose stone on Durdham Downs near Bristol; but I regret that I did not at the time examine the animal.

5. VULGARIS.

Animal nigro-griseum, nitidulum. *Tentacula* nudo oculo nequaquam discernenda, armato punctiformia videntur.

Testa oviformis, subventricosa, glabra, nitida, rufescens-brunnea. *Anfractus* 4—5. *Apertura* suborbiculato-lunata, marginibus disjunctis, extùs marginata, intùs 4 lamellis, nempè 1 columellari et 3 labralibus instructa: *peristomio* tenui, posticè subreflexo. *Umbilicus* angustatus.

Long. 0.075.—Diam. 0.04.

Turbo sexdentatus junior. *Mont. Test. Brit.* p. 337.

Pupa pygmæa. *Drap. Hist. des Moll.* p. 60. t. 3. f. 30, 31.

Vertigo pygmæa. *Fér. Tab. des Moll.* p. 64.

— *vulgaris.* *Leach MSS.*

Not uncommon under stones, &c. in sheltered parts of the limestone rocks in the neighbourhood of Swansea and Bristol; and occasionally found with the following.

6. PALUSTRIS.

Animal nigro-griseum, nitidum. *Tentacula superiora* brevia, ad basin inflata; *inferiora* sub lente punctiformia. *Anterior pars capitis* proboscidiformis.

Testa dolioliformis, ventricosa, nitida, glabra, fusco-cornea. *Anfractus* 5. *Apertura* suborbiculato-lunata, marginibus disjunctis, extùs marginata, sinuata, intùs 6—9 lamellis, nempè 2—3 columellaribus et 4—6 labralibus coarctata: *peristomio* simplici. *Umbilicus* angustatus.

Long. 0.085.—Diam. 0.05.

Turbo sexdentatus. *Mont. Test. Brit.* p. 337. t. 12. f. 8.

Maton & Rackett in Linn. Trans. 8. p. 183. *Pult. Dorset.* ed. 2. p. 52. t. 19. f. 12.

Pupa Antivertigo. *Drap. Hist. des Moll.* p. 60. t. 3. f. 32, 33.

Vertigo palustris. *Leach MSS.*

On

On the waterflag in marshy ground at Marino near Swansea, and among the rejectamenta of the Avon river near Bristol.

The *Helix minuta* of Müller, referred by Montagu with doubt to the present species, is probably the *Cyclostoma vitreum* of Draparnaud (a variety of the *Paludina acuta*), and is a freshwater shell.

Genus IX. VERTIGO. Müll.

Animal corpore attenuato. *Tentacula inferiora* punctiformia,
valdè indistincta.

Testa cylindraceo-fusiformis, spirâ brevi, sinistrorsâ. Apertura extùs marginata, sinuata, intùs denticulis coarctata: peristomio subreflexo.

1. PUSILLA.

Animal griseum, subtùs pallidius. Sustentaculum angustum.
Testa ventricosior, attenuata, glabra, nitidula, fragilissima,
pallidè fusca. *Anfractus 5. Apertura subquadrata,*
subtùs rotundata, lamellis 6—7 albis, nempè 2 vix 3
columellaribus et 4 labralibus munita: *peristomio tenui.*
Umbilicus subangustatus.

Long. 0.085.—Diam. 0.045.

Vertigo pusilla. Müll. *Verm.* 2. p. 124.

Pupa Vertigo. Drap. Hist. des Moll. p. 61. t. 3. f. 34, 35.

Alive under moss in a coppice at Newton near Swansea,
and among the rejectamenta of the Avon river near Bristol.

2. ANGUSTIOR.

Animal —————

Testa ventricosior, subdolioliformis, pallidè fulva, argutè et

lentissimè striata. *Anfractus* 4—5, penultimâ vix latiori. *Apertura* subtriangularis, dentibus 4—5, nempè 2 columellaribus et 2—3 labralibus insignita: *peristomio* subincrassato. *Umbilicus* angustatus.

Long. 0.06.—Diam. 0.035.

Turbo Vertigo. *Mont. Test. Brit.* p. 363. t. 12. f. 6.

Among the rejectamenta of a small stream at Marino near Swansea, but very sparingly.

Besides the very different contour and more contracted aperture of this shell, the circumstance of the teeth being more sunk in some specimens than in others (which peculiarly denotes the growth of dentate shells), sufficiently refutes the idea of its being the young of the *V. pusilla*.

Familia II. CARYCHIADÆ. Leach.

Divisio I. *Operculo testaceo.*

10. *Cyclostoma.*

Divisio II. *Operculo nullo.*

11. *Carychium.*

12. *Auricula.*

Genus X. CYCLOSTOMA. Drap.

Animal anteriore parte capitis proboscidali. *Tentacula* brevia, inflata. *Oculi* subpedunculati.

Testa turrita: *anfractibus* cylindricis. *Apertura* suborbiculata: *peristomio* incrassato, subreflexo, continuo. *Operculum* nucleatum.

1. ELEGANS.

Animal fusco-griseum: *proboscide* elongato, contractili.

Testa ovato-conica, acuminata, solidior, flavescenti-cinerea, sœpè

sæpè dupli serie macularum insignita, spiraliter cancellato-striata. *Anfractus* 5, ventricosi. *Apertura* orbiculata. *Umbilicus* foramine obliquo. *Operculum* solidum.

Long. 0.6.—Diam. 0.4.

Turbo reflexus. *Linn. Syst. Nat.* 1. p. 1238?

Nerita elegans. *Müll. Verm.* 2. p. 177.

Turbo elegans. *Mont. Test. Brit.* 342. t. 22. f. 7. *Maton & Rackett in Linn. Trans.* 8. p. 167. *Dillw. Cat.* 2. p. 863.

Cyclostoma elegans. *Drap. Hist. des Moll.* p. 32. t. 1. f. 5—8. *Lam. Hist. des Anim. sans Vert.* 6. p. 148.

Not uncommon at the roots of fern and in the clefts of limestone rocks near Swansea.

2. TRUNCATUM.

Animal pallidum: proboscide elongato. Tentacula brevia, parùm acuminata. Sustentaculum breve. Operculum fragile, arcuatè striatum. (*Drap.*)

Testa elongato-cylindrica, glabra, fragilis, pallidè lutescens. Anfractus 4, suturâ distinctâ, subcrenatâ. *Apertura* ovata. *Umbilicus* vix ullus.

Long. 0.165.—Diam. 0.065.

Turbo truncatus. *Mont. Test. Brit.* p. 300. t. 10. f. 7. *Cyclostoma truncatum, β. et γ.* *Drap. Hist. des Moll.* p. 40. t. 1. f. 30, 31.

Of this I found a few specimens mixed with the *Cionella Acicula* and other land-shells in some fine sand from Weymouth-bay, into which they were probably carried down by some freshwater stream. Mr. J. S. Miller showed me several

several in his cabinet, which he said were from marshes in Hampshire.

The *Helix subcylindrica* of Montagu, which he informs us was sent him by Dr. Pulteney as found "on water-plants in rivers and ponds in Dorsetshire," is marine, and a different species, though classed with the present by Draparnaud.

Genus XI. CARYCHIUM. Müll.

Animal corpore angustato. *Tentacula* brevia, cylindrica.

Testa turrita, elongato-clavata seu fusiformis, spirâ acuminatâ.

Apertura plerumque marginata, intùs subcontinuis lamellis instructa.

* *Edentula*; *peristomio simplici*.

1. FUSCUM.

Animal tentaculis subulatis, ad basin approximatis. In loco tentaculorum inferiorum 2 maculæ nigrae inæquales discernendæ. (Fér.)

Testa clavata, obtusè acuminata, rufesceni-brunnea, nitida, lineolis transversis raris impressa. *Anfractus* 6. *Apertura* ovata: *peristomio* tenui, posticè subreflexo. *Umbilicus* patens.

Long. 0.125.—Diam. 0.05.

Turbo fuscus. *Walker Test. Min. Rar. f. 42.* *Mont.*

Test. Brit. p. 330?

Auricula lineata. *Drap. Hist. des Moll. p. 57. t. 3. f. 20, 21.*

Carychium lineatum. *Fér. Tab. des Moll. p. 100.*

Monstrum spirâ sinistrorsâ.

Of this hitherto obscure shell (if it be indeed the *Turbo fuscus* referred by Montagu to Walker's plate, which was published

published in 1784,) several specimens have occurred to me, and one of the reversed distortion, among the rejectamenta of the Avon river near Bristol. It is, as Féruccac, who has given a detailed description of the animal, very justly observes, quite an anomaly in the genus.

** *Aperturâ marginatâ, dentibus seu lamellis subcontinuis instructâ : peristomio incrassato.*

2. MINIMUM.

Animal albido-flavescens, pellucidum. Sustentaculum tenue, dilatatum.

Testa ovato-subclavata, acuminata, nitida, pellucida, albida, (sub lente) argutè et transversim striata. Anfractus 5, subtruncati. Apertura ovalis, lamellis 3, scilicet 1 colummari et 2 labralibus munita : peristomio subreflexo. Umbilicus vix ullus.

Long. 0.07.—Diam. 0.045.

Carychium minimum. Müll. Verm. 2. p. 125.

Turbo carychium. Mont. Test. Brit. p. 339. t. 22. f. 2.

Maton & Rackett in Linn. Trans. 8. p. 184. Dillw.

Cat. 2. p. 880.

Auricula minima. Drap. Hist. des Moll. p. 57. t. 3. f. 18, 19.

Common at the roots of grass, &c. in moist places.

3. POLITUM.

Animal ——

Testa clavata, subfusiformis, glabra, nitida, dilutè fusca.

Anfractus 7, suturâ vix conspicuâ marginati. Apertura subcordata, sinuata, lamellis 5, nempè 2 inæquilibus

libus in columella, 2 in columellari labio, et 2 in labio externo : peristomio subincrassato. *Umbilicus nullus.*

Long. 0.25.—Diam. 0.1 ferè.

Turbo tridens. *Mont. Test. Brit.* p. 338. t. 11. f. 2.

Maton & Rackett in Linn. Trans. 8. p. 181. *Pult. Dorset.* ed. 2. p. 51. t. 21. f. 15.

Helix (Cochlodonta) Goodalli. *Fér. Tab. des Moll.* p. 71.

Though confined to certain localities, this shell has been lately found in considerable plenty in different parts of Great Britain. For my specimens I am indebted to the kindness of Mrs. Smith, who collected several of them alive about eight or ten years ago on some loose fragments of rock in Brockley Coombe near Bristol. The physiology of the animal yet remains in considerable doubt ; and it is much to be wished that some naturalist, who has an opportunity of doing so, would attend to the habits and peculiarities of this interesting species.

The *Helix tridens* of Müller is more closely allied to this species than has been supposed ; and from its great resemblance in the form of the shell will probably rank under the same genus.

Genus XII. AURICULA. *Drap.*

Animal anteriore parte capitis proboscidali. Tentacula subulata.

Testa turrita, fusiformis, spirâ acuminatâ, incompletâ. Anfractus sese invicem involventes, ultimo plusquam maximo. Apertura elongata, dimidium testæ æquiparans, ad basin subeffusa, lamellis continuis instructa. Umbilicus nullus.

The inhabitants of this genus, though from the nature of their

their organs of respiration they must rank with the terrestrial *Mollusca*, are strictly amphibious, living in the clefts of rocks and the under surfaces of stones which are exposed only by the recess of the tide. Their food (at least that of the *A. denticulata*, the only one of which I have observed the animal,) consists of decaying animal and vegetable substances. It is curious to observe the strange confusion that has taken place among later authors as to the real habitat of this class. Montagu and Draparnaud respectively assigned to their *Voluta denticulata* and *Auricula myosotis* a place among the marine and terrestrial *Mollusca*: the one from having observed the shells with their animals on *Algæ* at high-water mark on the Plymouth coast; and the other on dead and decaying wood on the shores of the Mediterranean. Baron Féruccac indeed was perfectly aware of their peculiar organization, but errs in saying that they have the power of going out of the water. The last-mentioned author has arranged them under his *Gehydrophiles*, a very interesting sub-order of the pulmoniferous *Mollusca*, but a much too extensive one, since it embraces the *Voluta tornatilis*, *Turbo unidentatus*, *plicatus*, &c. of Montagu; all which, from opportunities I have had of examining their animals, I am perfectly assured do not agree with the present division, having a very different respiratory system and a truly marine habitat.

The want of the internal spiral septa of the shells first noticed by Montagu is very curious.

1. DENTICULATA.

Animal griseo-purpurascens. *Tentacula brevia*, *annulata*.

Proboscis elongatus.

Testa oblonga, *subventricosa*, *fragilis*, *glabra*, *purpureo-*

fuscescens. *Anfractus* 6—8. *Apertura oblonga*, intus subincrassata, plicis 3—5 columellaribus instructa : *peristomio subreflexo*.

Long. 0.3.—Diam. 0.125.

Voluta denticulata. *Mont. Test. Brit.* p. 234. t. 20. f. 5.

α. ventricosior, plicis columellaribus 2 vix 3.

Turbo bidentata. *Walker Test. Min. Rar. f.* 50 & 53.

Auricula myosotis. *Drap. Hist. des Moll.* p. 56. t. 3. f. 16, 17.

β. labio interno denticulato.

Voluta ringens. *Turton's Conch. Dict.*

γ. major ; spirâ productiore, aperturæ labio denticulato.

Voluta reflexa. *Turton's Conch. Dict.*

Among the rejectamenta of rivers, &c., near their communication with the sea. The variety γ. is found, unmixed with the common sort, in the clefts of rocks on the Swansea coast near high-water mark, within the influx of the tide. This variety is less ventricose, and has the peristome not so much reflected on the columella. I was at first inclined to consider it a distinct species ; but the intermediate gradations are almost imperceptible, and I have been assured it is found, together with the other varieties, in the crevices of the harbour walls at Weymouth.

I suspect that the *Voluta hyalina* of Montagu is only an imperfect specimen of this last variety.

2. BIDENTATA.

Animal albidum. *Tentacula perbrevissima*, nigro-marginata. (*Mont.*)

Testa ovata, ventricosa, solida, alba, glabra, nitida, spirâ brevi. *Anfractus* 5, suturâ valde indistinctâ. *Apertura*

tura oblonga, plicis 2 columellaribus conspicuis : peristomio subincrassato, posticè subreflexo.

Long. 0.15.—Diam. 0.085.

Voluta bidentata. Mont. Test. Brit. Suppl. p. 100.
t. 30. f. 2.

Auricula bidentata. Fér. Tab. des Moll. p. 103.

From the coasts of Devon; but I have never found it alive. It differs from the following in colour and thickness, in the teeth or folds being more conspicuous, and not sunk in the interior of the aperture, and especially in the tumidity of the last volution.

3. EROSA.

Animal —

Testa ovato-oblonga, solidior, albida, spirâ rugosâ, sæpè decorticatâ. Anfractus 4—5. Apertura oblonga, intus juxta peristomium subincrassata, plicis 2 columellaribus parùm obtectis munita : peristomio tenui, posticè subreflexo.

Long. 0.165.—Diam. 0.075.

Not uncommon on the Plymouth coast on the under surfaces of stones left bare by the tide. In Mr. Dillwyn's cabinet I observed a specimen which had been sent him by the late Colonel Montagu under the name of *Voluta bidentata*. In this the spire is more regularly produced; and it has that eroded appearance which is characteristic of the species.

4. ALBA.

Animal —

Testa fusiformis, acuminata, tenuis, pellucida, alba, trans-

versim substriata. *Anfractus* 6. *Apertura oblonga, angustior, plicis 2 columellaribus munita: peristomio simplici.*

Long. 0.175.—Diam. 0.065.

Voluta alba. *Mont. Test. Brit. p. 235?* (not of the *Suppl.*) *Turton's Conch. Dict.*

Not uncommon among the rejectamenta of streams, near their communication with the sea.

The *Voluta triplicata* of British authors (if a true *Auricula*) has as yet only been found in Guernsey; and is therefore not admissible into the present catalogue.

Familia III. LIMNÆADÆ. Leach.

Tentaculis compressis, triangularibus.

Divisio I. *Testa cochleæformis.*

§ *Testâ turritâ.*

13. *Limneus.*

14. *Physa.*

Tentaculis compressis, subulatis.

§§ *Testâ discoideâ.*

15. *Planorbis.*

Divisio II. *Testa patellæformis.*

16. *Ancylus.*

Genus XIII. LIMNEUS. Drap.

Animal tentaculis brevibus. Sustentaculum latum, anticè bifidum. Testa ovato-oblonga, seu elongata, interdùm subconica. Apertura ovato-oblonga, ad basin effusa: peristomio simplici, posticè subreflexo: columellâ revolutâ.

All the inhabitants of this genus may be truly termed amphibious,

amphibious, since the nature of their food frequently obliges them to seek it on wet and marshy ground. During the spring they are greatly infested by a minute slender species of *Gordius*, which in number from two to ten attach themselves to the interior of the mantle near its connection with the neck of the animal. Draparnaud called them filamentary organs, and supposed that they performed the office of tentacula, probably from seeing them always in motion and appearing to issue from the back of the head. This troublesome parasite does not seem to be stationary, since I have not unfrequently observed it to change its place and take up perhaps more commodious quarters in another shell. It probably constitutes part of the food of the smaller *Dytiscidae*. After I had put two sorts (the *D. trifidus*, and *D. crassicornis*, M.) into the glass vessel where the *Limnei* were kept, I could not detect any signs of the *Gordii*; though in other cases I have known them to survive even after their guardians had begun to putrefy.

The food of the *Limnei* is animal and vegetable matter in different states of putridity; which makes them deserve the perhaps not inapt epithet of "Scavengers of the waters." In the absence of other nourishment they will even devour each other, piercing the shell near its apex, and eating away the upper folds of its inhabitant. This accounts for the mutilated and often imperfectly repaired state of the upper volutions of some specimens.

* *Umbilico nullo, peristomio non reflexo.*

1. GLUTINOSUS.

Animal lubricum, viscidum, album, punctis sparsum cinnereis: pallio gelatinoso spiram obtegente. (Müll.)
Testa subglobosa, ventricosa, nitida, diaphana, fragilissima,

sima, lutescenti-cornea. *Anfractus* 2 vix 3, spirâ de-
pressâ, vix exsertâ. *Apertura amplissima*: *peristomio*
tenui.

Long. 0.3.—Diam. 0.2.

Limneus glutinosus. *Drap. Hist. des Moll.* p. 50.

Buccinum glutinosum. *Müll. Verm.* 2. p. 129.

Helix glutinosa. *Mont. Test. Brit.* p. 379. t. 16. f. 5.

Sent me by Mr. J. S. Miller, by whom it was found in tolerable abundance in ditches near Oxford. It is the only species not figured by Draparnaud in his *Histoire des Mollusques Terrestres et Fluviatiles de la France*.

** *Umbilico transverso, foramine in junioribus obteco, peri-*
stomio reflexo.

2. AURICULARIUS.

Animal subflavum, punctis aureolis minutis sparsum.
Testa subrotundo-ovata, valdè ventricosa, glabra, pellucida,
pallidè fulva, spirâ parùm exsertâ, acuminatâ. *An-*
fractus 4. *Apertura ovalis*, perampla.

Long. 1.25.—Diam. 0.85.

Limneus auricularius. *Drap. Hist. des Moll.* p. 49.
t. 2. f. 28, 29.

Helix auricularia. *Linn. Syst. Nat.* 1. p. 1250.

α. paulò minor; spirâ exsertiore striis argutis transversis
exaratâ.

Buccinium Auricula, var. *Müll. Verm.* 2. p. 128.

Helix limosa. *Mont. Test. Brit.* p. 381, t. 16. f. 1?

Ditches and lakes in most of the midland counties in England.

Tab. 2. f. 23. of Lister's *Historia Animalium Angliae*, which
has

has been generally referred to this species, is rather a good representation of the *L. pereger*. Indeed the *L. auricularius* has not been figured in either of that author's works ; and the only distinction made in the *Historia Animalium Angliae* between the two species is by designating the former "maximæ."

3. ACUTUS.

Animal virescenti-fuscum, punctis nigris et flavis minutè sparsum.

Testa elongato-ovata, ventricosa, glabra, subpellucida, fulvescens, spirâ obliquâ, acuminatâ. Anfractus 4. Aertura ovata.

Long. 0.65.—Diam. 0.375.

α. pellucidior, striis remotis transversis.

Plentifully in a large pool on Crymlyn Burrows, unmixed with any of the other *Limnei* except *L. truncatulus*. Young shells are of a more elongated form than those of either the *L. auricularius* or *L. pereger*. It appears to be intermediate between the two last-named species ; and I hesitated at first, knowing the great variation to which this genus is subject, to separate it from the *L. auricularius*, to which it is closely allied through its variety : but, independently of the more oblique and less ampullaceous form, and of its being invariably of a thicker consistency than that shell, the circumstance of the two species never being found together, though equally common in their respective localities, confirms me in my opinion. Besides, if they are not distinct, I am convinced that no real difference will be found to exist between any of the three species.

It is admirably described and figured (Plate VII. fig. 12.)
in

in Schröter's *Flusskonchylien*. A specimen in Mr. Dillwyn's cabinet, and which, if I mistake not, he said was also from the locality above mentioned, is named in Col. Montagu's handwriting as both *Helix auricularia* and *H. lutea*.

4. PEREGER.

Animal colore varians, plerumque flavo-maculatum. *Tentacula* flexilia. *Testa* ovato-oblonga, subventricosa, glabra, lutescens, sæpè limo foedata, spirâ acutâ. *Anfractus* 4—5. *Apertura* ovata.

Long. 0.65.—Diam. 0.325.

Limneus pereger. *Drap. Hist. des Moll.* p. 50. t. 2. f. 34—37.

Buccinum peregrum. *Müll. Verm.* 2. p. 130.

Helix putris. *Penn. Brit. Zool.* 4. p. 139. t. 86. f. 137.

— *peregra*. *Gmel. Syst. Nat.* 1. p. 3659. *Mont. Test. Brit.* p. 373. t. 16. f. 3.

α . major, subovata; spirâ brevi, acutâ.

Limneus ovatus. *Drap. Hist. des Moll.* p. 50. t. 2. f. 30, 31.

β . ovata; peristomio reflexo, subincrassato.

γ . ovalis, ampullacea; spirâ vix exsertâ.

Helix lutea. *Mont. Test. Brit.* p. 380. t. 16. f. 6.

δ . minor, oblongiuscula; spirâ acutâ, suturâ obliquâ.

Common every where in ditches, ponds, &c. It is exceedingly variable in size; some of the variety α . from Ireland exceeding an inch and a quarter, while few specimens of the variety δ . attain a quarter of an inch in length. Young shells of the varieties β . and γ . are remarkably ampullaceous.

I have no hesitation in referring the *Helix lutea* of Montagu

tagu to a variety of this species, having found it both in a living state, and thrown up together with other varieties on the sea shore near Swansea within the influx of the Briton-ferry river; but it would be curious to ascertain by what chemical process they receive their additional thickness.

5. MAJOR.

Animal lutescenti-fulvum, subtùs pallidius. Tentacula subconica.

Testa ovato-subulata, acuminata, glabra (sub lente seriatim arguto-striata), fragilis, albescenti-fusca. Anfractus 6, subangulati. Apertura ovata.

Long. 1.65.—Diam. 0.85.

*Limneus stagnalis. Drap. Hist. des Moll. p. 51. t. 2.
f. 38, 39.*

*Lymnaea stagnalis. Lam. Hist. des Anim. sans Vert.
6. p. 159.*

Helix stagnalis. Linn. Syst. Nat. 1. p. 1249.

α . *pellucidior, minùs gibbosa.*

β . *albida, teretior; suturâ obliquiore.*

Helix fragilis. Mont. Test. Brit. p. 369. t. 16. f. 7.

Bulimus fragilis. Lam. l. c. 6. p. 123?

Not uncommon in lakes, ponds, &c. Specimens of the variety β , which I have received from Oxfordshire, in all respects agree with a small specimen in the cabinet of Mr. Dillwyn, marked by Colonel Montagu with a reference to his *Helix fragilis*; and also with specimens in Mr. J. S. Miller's collection, sent by Dr. Leach under the specific name of *elegans*. The fig. 6. Plate VII. of Schröter's *Flussconchylien*, referred by Gmelin to the Linnaean *fragilis*, seems to agree well with this variety; but his fig. 8.

Plate VII. (referred by Montagu to the same shell) is only a very distinct variety of the *L. pereger*, specimens of which I have seen from France. This last is I believe the *Lymnaea intermedia* of Lamarck.

6. COMMUNIS.

Animal lutescenti-fuscum. Tentacula subconica, acuminata. Testa oblonga, acuminata, glabra, interdùm spiraliter rugosa, et sub lente striis transversis seriatim dispositis ornata, fusco-cornea. Anfractus 6—7. Apertura ovata : labro intùs sàepè violaceo, subincrassato.

Long. 0.875.—Diam. 0.325.

*Limneus palustris. Drap. Hist. des Moll. p. 52. t. 2.
f. 40, 41. & t. 3. f. 1, 2.*

*Helix limosa. Linn. Syst. Nat. 1. p. 1249?
---- palustris. Gmel. Syst. Nat. 1. p. 3658.
Buccinum palustre. Müll. Verm. 2. p. 131.
Stagnicola communis. Leach MSS.*

Very common in ditches and slowly-running streams.

7. ELONGATUS.

Animal nigrum. Tentacula albida. (Müll.)

Testa oblongo-cylindracea, acuminata, fragilis, pellucida, glabra (sub lente pulchrè seriatim striatula), albido-lutescens. Anfractus 7—8, teretes. Apertura elongato-ovata : peristomio vix posticè reflexo.

Long. 0.525.—Diam. 0.175.

*Limneus elongatus. Drap. Hist. des Moll. p. 53. t. 3.
f. 3, 4.*

*Lymnaea leucostoma. Lam. Hist. des Anim. sans Vert.
6. p. 162.*

Helix

Helix octona. *Linn. Syst. Nat.* 4. p. 1248. *Penn. Brit.*

Zool. 4. p. 138. t. 86. f. 135.

— octanfracta. *Mont. Test. Brit.* p. 396 & 588.

t. 11. f. 8.

— peregrina. *Dillw. Cat.* 2. p. 954.

α. subovata; anfractus 6, quorum infimus dimidium testæ subæquans.

Buccinum glabrum. *Müll. Verm.* 2. p. 135.

In many parts of the North of England; though a local shell. The variety is from Yorkshire. The outer lip of the aperture is often thickened exteriorly by a white rib.

8. TRUNCATULUS.

Animal cinerascens. *Tentacula brevia, acuminata.*

Testa ovato-oblonga, acuminata, fragilis, substriata, flavescenti-cinerea. *Anfractus* 6, ventricosiores, supernè angulati, suturâ excavatâ. *Apertura ovato-oblonga.*

Long. 0.425.—Diam. 0.2.

Limneus minutus. *Drap. Hist. des Moll.* p. 53. t. 3.
f. 5—7.

Buccinum truncatum. *Müll. Verm.* 2. p. 130.

Helix Fossaria. *Mont. Test. Brit.* p. 372. t. 16. f. 9.

Maton & Rackett in Linn. Trans. 8. p. 217. t. 5. f. 9.

Dillw. Cat. 2. p. 964.

Bulimus peregrinus. *Brug. Encycl. Meth.* n. 10.

α. minor, cornea, ventricosior.

β. magis cylindrica, fulva; suturâ obliquiore.

Nerita minuta. *Müll. Verm.* 2. p. 174?

Common nearly every where in ditches; often found in marshes occasionally overflowed by the sea.

The variety β. is remarkable for its more cylindrical form,

obtuse apex, and the deep umbilical perforation which is not interrupted by the reflexure of the peristome.

9. TINCTUS.

Animal nigrescenti-fuscum. *Sustentaculum* amplum.

Testa ovata, subconica, ventricosa, fragilis, pellucida, glabra (sub lente ut in *L. elongato* seriatim striatula), violaceo-cornea, spirâ brevi, obtusâ. *Anfractus* 4—5. *Apertura* ovata: *peristomio* vix posticè reflexo.

Long. 0.225.—Diam. 0.15.

In a marshy piece of ground at Marino near Swansea. It seems to be an intermediate species between the *L. truncatus* and the following.

10. GRAYANUS.

Animal ———

Testa ferè conica, subventricosa, acuminata, nitida, pellucida, substriata, violascenti-cornea. *Anfractus* 6. *Apertura* subovata: *peristomio* simplici, posticè albo, reflexiusculo.

Long. 0.125.—Diam. 0.08.

Sent me by Mr. J. S. Miller under the name of *Assiminea Grayana*, first given to it by Dr. Leach. From the Greenwich marshes.

11. DETRITUS.

Animal ———

Testa ovata, subconica, subventricosa, solidula, alba, sublente spiraliter striatula. *Anfractus* 6, suturâ vix distinctâ. *Apertura* oblongiuscula, labro intùs subincrassato: *peristomio* tenui, subreflexo.

Long.

Long. 0.6.—Diam. 0.4.

- Helix detrita.* *Müll. Verm.* 2. p. 101. *Pult. Dorset.*
p. 49. 2d edit. p. 56. t. 19. f. 26. *Mont. Test. Brit.*
p. 384. t. 11. f. 1.
— *substriata.* *Gmel. Syst. Nat.* 1. p. 3667. *Dillw.*
Cat. 2. p. 958.

Given me by Mr. Dillwyn, who thinks he procured them from the neighbourhood of Bantry, Ireland. I place it last, as a doubt may reasonably be entertained of its belonging to this genus; or indeed to the *Limnæadæ* at all. Mr. Bryer is said to have found it in several streams in Dorsetshire; and Dr. Turton says that he has himself seen it alive in Freshwater, Dublin. It is not the *Bulimus radiatus* of Bruguiere and Draparnaud.

Genus XIV. *PHYSA. Drap.*

Animal tentaculis filiformibus. *Sustentaculum* per breve, latum,
anticè integrum.

Testa sinistrorsa, oblonga, ampullacea. *Apertura* oblonga, ad
basin effusa: *peristomio* simplici: *columellâ revolutâ*.

1. *FONTINALIS.*

Animal nigro-griseum. *Tentacula* albida. *Pallium* amplum,
in lacinias divisum.

Testa ovato-oblonga, ventricosa, fragilis, diaphana, cornea;
spirâ brevi, obtusâ, excentrica. *Anfractus* 4. *Apertura*
ovato-oblonga.

Long. 0.3.—Diam. 0.2.

Physa fontinalis. *Drap. Hist. des Moll.* p. 54. t. 3. f. 8, 9.

Bulla fontinalis. *Linn. Syst. Nat.* 1. p. 1185.

Planorbis Bulla. *Müll. Verm.* 2. p. 167.

α. major,

- $\alpha.$ major, ventricosior, albida.
- $\beta.$ ovalis, fulva; spirâ prominulâ.

Bulla rivalis. *Maton & Rackett in Linn. Trans.* 8.
p. 126. t. 4. f. 2.

- $\gamma.$ oblongiuscula, fragilissima, resiliens; aperturâ oblongâ, angustiore.

Planorbis gelatinus. *Müll. Verm.* 2. *p. 170?*

- $\delta.$ minor, globosa.

Bulla fluviatilis. *Turton's Conch. Dict.*

On aquatic plants in slowly-running streams.

The variety $\beta.$, which has I suspect been mistaken by the learned authors of the Catalogue of British Testacea for a distinct species, is of a paler colour, less fragile texture, and has the spire, which consists of from five to six volutions, more produced. Such I have received from Oxfordshire, of a larger size. In the *Physa acuta* of Draparnaud, specimens of which I have from one of the North American lakes, the spire is nearly exactly central; and, though not more produced, tapers to an exceedingly fine point. The aperture is also narrower and more elongated. The variety $\alpha.$ was favoured me by Mr. Dillwyn, who in company with Dr. Leach found it in a small stream on Monavallach mountain near Kilmacthomas, Waterford.

The animal is phytophagous, feeding principally on water-cresses and other aquatics. The spawn is cast in the beginning of April and following months, and at first appears a globular and confused mass, of a clear white colour; but in process of time and before the young are excluded, its form alters to oblong, and the embryos are very distinctly seen, in number from three to ten, inclosed in its gelatinous and now transparent covering. In about a month or five weeks,

weeks, the young, with their testaceous coats completely formed, and about the size of a pin's head, burst their envelope, and immediately enter upon their new functions, swimming and walking with great activity.

2. HYPNORUM.

Animal nigrescens. Tentacula supernè albida. Sustentaculum latum.

Testa elongato-fusiformis, subventricosa, acuminata, fragilis, diaphana, polita, fulvo-cornea. Anfractus 7, valdè turriti. Apertura oblonga.

Long. 0.5.—Diam. 0.2.

*Physa hypnorum. Drap. Hist. des Moll. p. 55. t. 3.
f. 12, 13.*

Bulla hypnorum. Linn. Syst. Nat. 1. p. 1185.

Planorbis turritus. Müll. Verm. 2. p. 169.

In slowly-running streams in many parts of Great Britain. Some specimens before me, from the garden ponds of Fremington-house, Devonshire, are of unusual size, measuring full three quarters of an inch in length. I have only found them in the hottest days of the summer and autumn months on the surface of the water, where they lie floating with their shells downwards.

Genus XV. PLANORBIS. *Müll.*

Animal tentaculis filiformibus, acuminatis. Sustentaculum anticè integrum, rotundatum.

Testa depressa : anfractibus cylindraceis : spirâ vix unquam exsertâ : aperturâ subrhomboideâ, marginibus inæqualibus : peristomio simplici.

* *Anfractibus*

* *Anfractibus plurimis, connexis.*

1. VORTEX.

Animal violaceo-fuscum. Tentacula albida.

Testa suprà subconcava, glabra, tenuis, pellucida, fuscenti-cornea, subtùs plana, carinâ marginali. Anfractus 6—8, sensim decrescentes. Apertura compresso-rhomboidea.

Long. 0.065.—Diam. 0.4.

Planorbis Vortex. *Müll. Verm.* 2. p. 158. *Drap. Hist. des Moll.* p. 44. t. 2. f. 4, 5.

Helix Vortex. *Linn. Syst. Nat.* 1. p. 1243.

α. anfractu ultimo in carinam supernè obliquato.

β. minor, carinâ obsoletâ.

Planorbis Vortex, β. *Drap. Hist. des Moll.* p. 45. t. 2. f. 6, 7.

— spirorbis. *Müll. Verm.* 2. p. 161. *Lam. Hist. des Anim. sans Vert.* 6. p. 153.

Helix spirorbis. *Gmel. Syst. Nat.* 1. p. 3624. *Mont. Test. Brit.* p. 455. t. 25. f. 2.

Common in ditches, &c. The presence of a keel, and the consequent flatness of the under side, are not constant characters.

2. CONTORTUS.

Animal fuscum. Tentacula brevia, pallida.

Testa suprà subconcava, subtùs concava, perforata, glabra, tenuis, pellucida, fulvescenti-cornea. Anfractus 8, extùs rotundati, suturâ excavatâ. Apertura valdè compressa.

Long. 0.075.—Diam. 0.25.

Planorbis

Planorbis contortus. *Müll. Verm.* 2. p. 162. *Drap.*

Hist. des Moll. p. 42. t. 1. f. 39—41.

Helix contorta. *Linn. Syst. Nat.* 1. p. 1244.

In ditches, &c. ; but more local than the last.

** *Anfractibus paucis.*

3. CORNEUS.

Animal nigrum. *Tentacula longa, curvata, sordidè cinerea.*
(*Müll.*)

Testa suprà concava, perforata, subtùs plana, subumbilicata, tenuis, substriata, castaneo-fusca seu cornea.
Anfractus 6, extùs rotundati. *Apertura subdilatata :*
peristomio reflexiusculo.

Long. 0.45.—Diam. 1.25 ferè.

Planorbis corneus. *Drap. Hist. des Moll.* p. 43. t. 1.
f. 42—44.

— Purpura. *Müll. Verm.* 2. p. 154.

Helix cornea. *Linn. Syst. Nat.* 1. p. 1243.

In slow rivers and large pools of the midland counties of England.

4. TURGIDUS.

Animal —

Testa suprà planiuscula, subtùs plana, lateribus inæquалиssimis, utrinque subumbilicata, fragilis, hyalina, substriata, sordidè alba. *Anfractus 6,* subangulati.
Apertura inæqualis.

Long. 0.2.—Diam. 0.55.

Planorbis albus. *Shröter Flussconch.* t. 5. f. 28.

Helix turgida. *Gmel. Syst. Nat.* 1. p. 3641.

A single dead specimen only has as yet occurred to me of this curious shell, which was found in Crymlyn Bog near Swansea. It is totally different from any other British *Planorbis*; and has somewhat the form of the last. The whitish bands remarked by Shröter on the body volution of his specimens are wanting in this.

5. UMBILICATUS.

Animal nigrescens. Tentacula rufa. (Müll.)

Testa suprà umbilicata, subtùs plana, subperforata, carinâ marginali distincta, tenuis, substriata, flavescenti-cornea. Anfractus 5—6, rotundati, globosi. Apertura subrotundo-rhomboidea.

Long. 0.175.—Diam. 0.6..

Planorbis umbilicatus. Müll. Verm. 2. p. 160.

— marginatus. Drap. Hist. des Moll. p. 45.
t. 2. f. 11, 12.

Helix complanata. Linn. Syst. Nat. 1. p. 1242. Dillw. Cat. 2. p. 897.

— Planorbis. Penn. Brit. Zool. 4. p. 133. t. 83.
f. 123. Maton & Rackett in Linn. Trans. 8. p. 188.
t. 5. f. 13.

In ditches, &c. Young shells show scarcely any trace of a keel; and, independently of the greater thickness and convexity of the volutions, they cannot be mistaken for the following, in which the carina is in every stage of growth equally distinct on both sides, owing to the greater slope of the body whorl.

6. CARINATUS.

Animal fuscum. Tentacula incurvata, opaca.

Testa

Testa suprà umbilicatula, subtùs convexiuscula, vix perforata, utrinque in carinam acutam obliquata, lateribus subinæqualibus, tenuis, substriata, flavescentia. *Anfractus* 6, subdepressi. *Apertura* angulata.

Long. 0.2.—Diam. 0.65.

Planorbis carinatus. Müll. *Verm.* 2. p. 157. Drap. *Hist. des Moll.* p. 46. t. 2. f. 16.

Helix Planorbis. Linn. *Syst. Nat.* 1. p. 1242. Gmel. *Syst. Nat.* 1. p. 3617.

— complanata. Mont. *Test. Brit.* p. 450. t. 25. f. 4.

— planata. Maton & Rackett in Linn. *Trans.* 8. p. 189. t. 5. f. 14.

In ditches, &c.; but I have never found it mixed with the last.

7. LUTESCENS.

Animal pallidè flavescentia. Tentacula pellucida. (Mont.)
Testa dilatata, valdè depressa, suprà umbilicatula, subperforata, subtùs convexiuscula, utrinque in carinam acutam prominulam obliquata, lateribus æqualibus, fragilissima, hyalina, glabra, albido-lutescens. *Anfractus* 4 vix 5. *Apertura* acuta, angulosa.

Long. 0.125.—Diam. 0.5.

Planorbis lutescens. Lam. *Hist. des Anim. sans Vert.* 6. p. 153.

Helix carinata. Mont. *Test. Brit.* p. 451. t. 25. f. 1.
— *Planorbis.* Dillw. *Cat.* 2. p. 896.

In stagnant pools in some of the midland counties of England; often mixed with the last, but much less common.

Schröter has noted all the three last species, though, as is evident from his referring his figure of the *Planorbis carinatus*

rinatus in his *Einleitung* to the *Helix complanata* of Linnæus, he has not separated the other two. His fig. 13. Pl. V. of the *Flussconchylien* is an exact representation of the *Pl. lutescens*; and in speaking of his “*Helix planorbis crassa*” (our *Pl. umbilicatus*), he says, “The specimen from Hamburgh is black, with the keel sharp and visible on both sides.

Much confusion existed in Müller's time as to the *Helix Planorbis* and *complanata* of Linnæus; nor has it been in any wise removed by succeeding authors. In their eagerness to adapt their new discoveries to the pages of that illustrious naturalist, they seem to have lost sight of the circumstances under which even the latest edition of the *Systema Naturæ* was written, and to have given him credit for trivial distinctions, which it was scarcely possible could, in that state of science, have been attended to, and which often they themselves but imperfectly understood. The *Helix Planorbis* of that work has been referred by the three authors who have last treated on the subject of British Conchology, to as many distinct species; and nearly as great uncertainty has prevailed as to the true *H. complanata*.

8. DRAPARNALDI.

Animal —

Testa utrinque subumbilicata, perforata, carinâ mediâ subprominulâ, lateribus æqualibus, tenuis, pellucida, glabra (sub lente transversim argutissimè striata), *lutescenti-fusca. Anfractus 5, convexiores. Apertura dilatata, subrotundo-rhomboidea : peristomio libero.*

Long. 0.1.—Diam. 0.325.

*Planorbis spirorbis. Drap. Hist. des Moll. p. 45. t. 2.
f. 8, 9?*

Planorbis

Planorbis deformis. *Lam. Hist. des Anim. sans Vert. 6.*
p. 154.

Helix rhombea. *Turton's Conch. Dict.?*

— — *Draparnaudi.* *Shepp. in Linn. Trans. 14.* p. 158.

Sparingly among the rejectamenta of the river Taaf near Cardiff. It somewhat resembles an over-grown specimen of the following; but differs in the disproportionate size and medial carina of the last volution, and, above all, in its colour and fine transverse striæ.

9. ALBUS.

Animal grisescens. *Tentacula longa, flexilia.*

Testa utrinque subumbilicata, perforata, tenuis, pellucida,
reticulato-striata, albida, epidermide fusco induta.

Anfractus 5, convexiores. *Apertura subrotundo-rhom-*
boidea : peristomio vix soluto.

Long. 0.075.—Diam. 0.2.

Planorbis albus. *Müll. Verm. 2.* p. 164.

— — hispidus. *Drap. Hist. des Moll.* p. 43. t. 1.
f. 45—18. *Lam. Hist. des Anim. sans Vert. 6.* p. 154.

Helix spirorbis. *Linn. Syst. Nat. 1.* p. 1244.

— — alba. *Gmel. Syst. Nat. 1.* p. 3625. *Mont. Test.*
Brit. p. 459. t. 25. f. 7.

Common on aquatic plants in ditches and slowly-running streams. The term "souvent hispide," applied by Draparnaud to this shell, may perhaps have originated in an accidental erosion of the epidermis.

10. GLABER.

Animal — —

Testa suprà planior, subtùs umbilicata, utrinque perfo-
rata,

rata, tenuis, nitida, diaphana, glabra, alba. *Anfractus* 4 vix 5, convexiusculi. *Apertura* subrotundo-rhomboidea: *peristomio* vix soluto.
Long. 0.05.—Diam. 0.175.

Found with the last; though much less common. It is a much more depressed shell than the *Pl. albus*, of a white colour, more polished and transparent, and is destitute of any markings. The upper side is uniformly more even, and the under exceedingly concave.

11. IMBRICATUS.

Animal grisescens. *Tentacula longa*, flexilia, acuminata. *Testa* depressa, suprà planior, subtùs convexiuscula, umbilicata, tenuis, pellucida, transversim imbricato-striata, fulva, epidermide fusco lamelloso induta. *Anfractus* vix 3; ultimo in carinam obtusam obliquante. *Apertura* subrotundo-romboidea: *peristomio* soluto.

Long. 0.015.—Diam. 0.1.

Planorbis imbricatus. *Müll. Verm.* 2. p. 165. *Drap.*

Hist. des Moll. p. 44. t. 1. f. 49—51.

Turbo nautileus. *Linn. Syst. Nat.* 1. p. 1241. *Gmel.*
Syst. Nat. 1. p. 3612.

Helix nautilaea. *Mont. Test. Brit.* p. 464. t. 25. f. 5.

a. duplò minor, albida, striis rarioribus.

Planorbis cristatus. *Drap. l. c.*

On the *Iris Pseudacorus* (on the decaying leaves of which the animal feeds), in pools and ditches, in the autumn; but not common.

12. NITIDUS.

Animal nigrum. *Sustentaculum latum.*

Testa

Testa deppressa, utrinque planior, subumbilicata, subtus perforata, fragilis, diaphana, politissima, ferrugineo-cornea aut albida. *Anfractus* 3—4; *ultimo* in carinam acutiusculam utrinque obliquante. *Apertura* elongata, angulata: *peristomio* non reflexo, columellæ insidente.

Long. 0.05.—Diam. 0.175.

Planorbis nitidus. *Müll. Verm.* 2. p. 163.

— complanatus. *Drap. Hist. des Moll.* p. 45. t. 2. f. 20—22.

Helix fontana. *Lightf. in Phil. Trans.* 76. t. 2. f. 1. *Mont. Test. Brit.* p. 462. t. 6. f. 6.

On aquatic plants in ditches; but not very common.

13. LINEATUS.

Animal griseo-fuscum. *Tentacula filiformia.* (*Lightf.*)

Testa suprà convexa, subtus planior, perforata, utrinque subumbilicata, fragilis, diaphana, politissima, albido-lutescens. *Anfractus* 5—6; *ultimo* in carinam inferiorem obtusam utrinque obliquante, septis internis 3 vix 4 albis partito. *Apertura* elongata, angulata: *peristomio* non reflexo, columellæ insidente.

Long. 0.15.—Diam. 0.275.

Planorbis nitidus. *Drap. Hist. des Moll.* p. 46. t. 2. f. 17—19?

Helix lineata. *Walker Test. Min. Rar.* t. 1. f. 28.

Nautilus lacustris. *Lightf. in Phil. Trans.* 76. t. 1. f. 1—7.

My specimens were presented to me by Mr. J. S. Miller, and I believe came from the neighbourhood of London. The internal plates seem to stand in the place of the teeth or folds which barricade the apertures of many other Mollusca;

lusca ; and, I should think, would not impede the free ingress and egress of the inhabitant. They are noticed by Müller and Draparnaud, and were considered by the former (to whom both species appear to have been known) as the marks of growth or repair.

Genus XVI. ANCYLUS. Müll.

Animal tentaculis brevibus, cylindricis, subtruncatis. Sustentaculum anticè integrum.

Testa conica : apice acuto, recurvo : spirâ nullâ.

1. FLUVIATILIS.

Animal grisescens. Sustentaculum posticè dilatatum.

Testa ovata depressiuscula, vertice subcentrali, posteriùs infexo ; fragilis, nigrescenti-fusca, transversim radiato-striata, intùs cærulescens nitida. Apertura subovata.

Long. 0.125.—Diam. 0.25.

Ancylus fluviatilis. Müll. *Verm.* 2. p. 201. Drap. *Hist. des Moll.* p. 48. t. 2. f. 23, 24.

Patella lacustris. Linn. *Syst. Nat.* 1. p. 1260 ? Penn. *Brit. Zool.* 4. p. 143.

— fluviatilis. Da Costa *Brit. Conch.* 1. t. 2. f. 8. Gmel. *Syst. Nat.* 1. p. 3711. Mont. *Test. Brit.* p. 482.

a. major, pellucidior, viridescenti-albida ; vertice elatiore.

On stones in running streams. The variety is found in cold mountain springs, and has often a greenish tinge, probably arising from some minute adherent Conferva or other adventitious matter.

2. LACUSTRIS.

2. LACISTRIS.

Animal nigrescens. Tentacula breviora.

*Testa oblonga, subdepressa, vertice excentrico; fragilis,
membranacea, concentricè substriata, nigrescens.
Apertura oblonga.*

Long. 0.1.—Diam. 0.35.

*Ancylus lacustris. Müll. Verm. 2. p. 199. Drap. Hist.
des Moll. p. 47. t. 2. f. 25—27.*

*Patella oblonga. Lightf. in Phil. Trans. 76. p. 168.
t. 3. f. 1—5.*

*— lacustris. Gmel. Syst. Nat. 1. p. 3710. Mont.
Test. Brit. p. 484.*

On water-plants in ditches, lakes, &c.; though rather a local species. It is not uncommon in Blackpill marsh near Swansea, mixed with the *Planorbis nitidus*.

ADDITIONS AND CORRECTIONS.

Page 324, for Cianella, read Cionella.

HELIX FUSCA, p. 330.

*Animal lutescenti-griseum, dorso flavescenti. Tentacula
prælonga, flexilia.*

Since writing the above list, I have discovered this local species in great abundance in moist parts of Penllergare wood, near Swansea, on the leaves and stems of the *Herculeum Sphondylium* and other plants.

HELIX NITIDA, p. 339.

The variety $\beta.$ is found not uncommonly under leaves, decaying *Boleti*, &c. in the woods at Penllergare.